THE

MONTHLY

JOURNAL OF FOREIGN MEDICINE.

JANUARY, 1828.

Observations on the Unmixed Effects of Mercury on the System, with a few Practical Remarks on some of the most important Tropical Diseases.

By Anthony Musgrave, M. D. Physician to his Excellency the Governor, and Surgeon General on the Colonial Staff of Antigua, formerly President of the Royal Medical Society of Edinburgh.

From the Edinburgh Medical and Surgical Journal.

To the Editors of the Medical and Surgical Journal.

Gentlemen,

I have been a good deal surprised, since my arrival in Edinburgh, at observing, in the course of conversation with my professional friends, how very generally the opinion obtains, that the more aggravated affections of the bones, periosteum, throat, and skin, which we were formerly accustomed to regard as *venereal*, are in reality to be ascribed to the pernicious influence of *mercury* on the system,—an opinion which is entirely at variance with the results of my own observation, during nearly twelve years' residence in a climate where this remedy is extensively employed. I must, therefore, with your permission, avail myself of the ready channel afforded by your Journal, and lay before the profession a summary of my experience, as it bears upon the point in question.

Permit me, however, to explain, *in limine*, that it is by no means the object of this communication to attack the *non-mercurial treatment of syphilis*. On the contrary, I at once admit that Dr. Thompson's publication, and the writings of Mr. Rose, Dr. Hennen, Mr. Guthrie, and others, who have been more or less its advocates, were long ago so far successful in persuading me of the sufficiency, if not of the *expediency*, of this practice, that I was induced to refer it to the test of experiment in the Colonial Hospital at Antigua. This happened so far back as the year 1819; and having completely satisfied myself, in several instances occurring among seamen, that chancre, accompanied by suppurating bubo, would heal up kindly enough under the antiphlogistic regimen, aided by rest and posture, I put the patients through mild courses of the quicksilver pill, and then dismissed them;—but not till then, as I did not think that sufficient evidence had been up to that time accumulated to warrant me in exposing these men to what might prove to be the secondary consequences of such treatment. For the same reason I did not venture in private practice to dispense with a mode of cure, which early instruction had led me to deem essential, and daily experience gave me no cause to regard as either ineffectual or unsafe, when conducted with circumspection,—without which the practitioner must always be dangerous, exactly in proportion to the power of the medicine he prescribes. The value of the lancet and opium as therapeutical agents, few, I presume, will be disposed to question; but is it not equally undeniable that fatal exhaustion or stupor may be the consequence respectively of the excessive or even mistimed exhibition of either?

That mercury, however, will, in certain states of a constitution long charged with the venereal virus, aggravate those very symptoms which on other occasions it is found to relieve, is a fact which no man of ordinary ability can doubt after having been engaged in practice for a very limited period; and I have myself, when consulted in inveterate cases, repeatedly derived both gratification and professional credit from advising an instant omission of all mercurial medicines, and the substitution of sarsaparilla or the nitric acid. Of phagedenic chancre again, I recollect at this moment more than one case in which the process, rapidly destructive under the use of mercury, was at once and permanently arrested by discontinuing this remedy, and interposing free venesection with the strictest antiphlogistic treatment, both constitutional and local. Whatever, therefore, may be my modified and impartial opinion, it is abundantly manifest that I entertain nothing like *prejudice* on either side of this question; and had the prevailing doctrines been *distinctly* confined to the peculiar operation of the supposed specific when employed against a syphilitic taint,—had it been even inculcated that the amalgamation, as it were, of the two poisons produces a new virus *sui generis*, differing in its action from both constituents, and giving rise to more lamentable effects than

352245

either,* I am persuaded—so ably and zealously have I heard them expounded—that I should scarce have escaped from your city other than a decided convert to these views. But, if I am not mistaken in my estimate, a majority of the profession in Edinburgh go much farther than this.—They believe, or at all events suspect, that *Mercury* is the SOLE parent of that loathsome and malignant progeny which has been hitherto, as they conceive, very injuriously confounded with the purer *Venereal* race, merely on account of some distant resemblance—and it is against the farther dissemination of *this* less harmless suspicion that I feel it to be imperative upon me to protest. It emanates, however, from sources in the highest degree influential.—It has already wrought incalculable mischief by instilling doubt and alarm into the public mind as to the properties of an invaluable remedy,—and it can therefore be successfully counteracted only by a direct appeal to FACTS.

Assuming for a moment this question to be one on which you were entirely without bias, and it became an object to you to ascertain beyond dispute any given effect of mercury, whether beneficial or injurious; what part of the world, let me ask, provided all were equally accessible, would you select as the field of observation and inquiry? Would you content yourselves with an investigation instituted by a class of practitioners here, who sparingly, and with hesitation, prescribe its various preparations by the grain and the half grain?—Or, would you not deem it more satisfactory to ascertain the consequences of its employment under a tropical sun, where, setting aside much deplorable *abuse*, even the most cautious among us,—keenly alive as we are to the inconvenience, nay, the absolute danger of its undue accumulation in the system,—are yet frequently compelled by paramount necessity, arising from past experience of the otherwise fatal result, to administer calomel *by the scruple*, or to repeat smaller doses of from five to ten grains at intervals so brief, as to be justified only by the consideration that we decide between two evils, the greater of which is *death?*

Or,—to put the query in another shape,—let us suppose that you had strong grounds for conjecturing that some peculiar morbid affection,—it little matters what,—was the offspring of a certain agency, which had hitherto eluded suspicion; the effect in question being universally attributed to causes of a different kind. Would you, in such a case, look for a confirmation of your conjecture, in the more general prevalence of this affection, towards districts where the influence of the suspected cause was only *partial?* or would you not rather resort to those where you knew it to be in *full* and *extensive* operation?

The replies which can alone be offered to queries such as these follow too palpably to admit of hesitation, even on the part of my opponents. In order, therefore, to establish a conclusive case against them, framed upon admissions thus extorted from themselves, it will be merely necessary for me to show, *first*, that a practitioner, *ceteris paribus*, would see as much mercury exhibited within *one* year in the West Indies, as another could possibly do in *five*, whose sphere of observation was limited to Edinburgh and its neighbourhood: and, *secondly*, that, notwithstanding this lavish consumption within the tropics, we, who have laboured there for a series of years, have not only failed to discover those pernicious consequences for which the anti-mercurialist contend, but have had constant occasion to remark, that examples of what is called secondary syphilis are comparatively rare, under circumstances which, had they the shadow of foundation for their suspicions, ought to render such cases as numerous, or nearly so, as the sum of inhabitants in an island.

I pledge myself to do this—and to show farther, that the unmixed venereal poison is fully capable, through neglect or concealment, of effectuating the very consummation of that mischief which they hold to be the "martyrdom of mercury."

With a view then to establish, in the least exceptionable manner, the superiority of the West Indies as a field for observing the effects of mercury, allow me to take a very hasty glance at the practice which at this moment prevails in regard to our principal diseases.—I shall notice them in the order of their general importance.*

The mercurial treatment of the *Fevers* of warm climates has little novelty to recommend it. But when I mention that the manual of Chisholm, and the works of Johnson and Armstrong, are held in general estimation as the best guides to which those in practice can refer, it were superfluous to add, that the number who confide in it is not likely to be diminished;—and, undoubtedly, in a majority of instances, its well regulated application will amply repay this confidence. But here, as elsewhere, the nicest discrimination must be exercised, if we would steer wide of the shoals and quicksands of empirical routine.

In the more concentrated form or higher grade of fever, as it affects Europeans, which has acquired the common denomination of *Yellow fever*—I mean the *continued*, and, if I may be allowed the expression, the more *open*

---

* This would be somewhat according to Sintelaer.—See an excellent Analysis of the Scourge of Venus and Mercury, London, 1709, and other works on Syphilis, Pseudo-syphilis, and Mercury, in the Med. Chir. Review for December 1821.

* The observations throughout this letter must be taken as specially referrible to Antigua, as my practice has been altogether confined to that island; and the diseases will follow according to the order in which, from the *frequency* of their occurrence, they have claimed my attention.

type, (such as prevailed in Antigua in 1816, and of which a history, sketched for the information of my respected friend, Dr. Ferguson, has been long before the public,)*—my experience leads me to believe, that mercury, administered with a view to the saturation of the system, may be judiciously dispensed with; and an opinion to this effect, which I have since seen no reason to alter, will be found in the article alluded to. In cases like these, we find the heat to be intense and general—the arteries, as far as the finger can trace them, have their calibre fully distended, showing the blood to be equally distributed among their extreme ramifications.—In a word, we have to rescue our patient from urgent inflammatory action, not to obviate the more insidious, but not less destructive consequences of congestion.

The immediate and rapid abstraction of blood from the arm, or temporal artery, or both, to an extent to be limited, less by the quantity, however large, than by its decided effect upon the circulation, as deduced from that degree of faintness which is accompanied by copious and general perspiration;† active purgative combinations, into which calomel must liberally enter; and the external application of cold water, under the form of affusion or sponging, with occasional aid from the razor and blisters, are here to be mainly depended upon, and will, in nine cases out of ten, prove sufficient to save our patient, when employed within twenty-four hours from the attack. But we are liable more frequently to a form of fever, peculiarly calculated, from its masked approach, to lull the patient into mistaken security, and thus to baffle, in its subsequent progress, the best directed efforts of our skill; and this form is undoubtedly treated with greatest success by the rapid induction of ptyalism.

Sporadic attacks of a more or less deceitful type, are indeed annually to be met with in some of the low swampy situations with which Antigua unfortunately abounds; but, towards the close of 1823, an epidemic of this kind appeared to an extent which spread the utmost consternation among all classes of inhabitants; for, singular to say, it evinced no predilection as usual for our European visiters. The whites, the coloured, and the blacks, males and females, infancy and old age, were alike susceptible of the malignant influence of the air, although that influence might be exerted with varied degrees of intensity.

The disease was commonly ushered in by a mild intermittent paroxysm of brief duration. The chilly fit, occurring generally at bed time, was succeeded by moderate heat, and this again terminated by sweating towards morning; so that, among the planters, for example, who were the principal sufferers, the patient would rise at daylight, take his breakfast as usual, and proceed to his accustomed occupation, without attaching the slightest importance to the indisposition of the night. The same would be repeated on the following evening with a similar solution of a rather aggravated paroxysm. But the third return, although commencing as before, would speedily be followed by some marked derangement of the censorium, which was probably the first signal for demanding medical advice. The individual was then commonly found talking wildly, with the heat concentrated about the head and trunk; the extremities cool, and covered with a greasy dampness; the pulse at the wrists extremely quick and small; respiration hurried; tongue brown and dry, or covered with a frothy slime; but the stomach generally retentive. Black vomit, as far as I know, was *never* observed, and discoloration of the surface with hemorrhage in *one* case only.*

These symptoms too often advanced with rapid strides to their termination in death, preceded by low delirium, or coma; sometimes within forty-eight hours, generally before the close of the third day from the last accession, which completed five from the first moment of complaint. Life was rarely protracted beyond this period without ultimate recovery, although convalescence might be occasionally tedious.

Such, in broad outline, were the prominent features of this singular modification of edemic disease—we must call it a *malignant intermittent*—in which so little resemblance can be traced to the yellow fever of authors. I have no difficulty, however, in regarding it but as an opposite degree of the same continuous scale, modified by agency which is beyond our ken,—for, although I have roughly delineated the phenomena exhibited by a very great majority of cases, here and there an example did occur in European habits of a form either continued *ab initio*, or preceded by one slight paroxysm only, and yielding to the vigorous treatment I have already described; and, among the slaves, we had an opportunity of observing every variety of the simple intermittent, which mingled itself by almost imperceptible gradations with the reigning epidemic.

I ought long ago to have recorded a full

---

* See account of the yellow fever as it appeared in Antigua in the years 1816-17, by A. Musgrave, M. D.—Med. Chir. Transactions, Vol. ix.

† When the patient becomes faint after a first and early bleeding, before perspiration breaks out, the finger ought only to be placed over the orifice till the horizontal position, and a little cold water, cause the stream to flow freely again. During the epidemic I am about to describe, I more than once drew three pints of blood in this way from plethoric habits with the happiest effect, when consulted immediately on the accession of the first paroxysm of fever.

* Among our younger patients, convulsions very commonly ushered in the alarming paroxysm.

detail of the origin and progress of this visitation, which extended from October 1823 to January 1824; but what I have now said will suffice for my present purpose, which is merely to convey some slight idea of the kind of fever which I hold to be the proper subject of mercurial treatment. On this occasion indeed I am persuaded, that where no assistance was obtained, as was too frequently the case, till after the third and dangerous paroxysm was established, any improvement which subsequently took place was chiefly to be ascribed to the operation of this mineral; nor am I aware of a single recovery, under these alarming circumstances, where recourse had not been had to its use. By its unrivalled power in equalizing the distribution of blood, the accumulated mass, lying stagnant in the almost palsied organs, was gradually put in motion. These organs, consequently, resumed their suspended functions; the wonted secretions were again established, and, being copiously poured forth, the system thus became relieved from an overwhelming oppression. Such at least appeared to me to be the *modus operandi* in favourable cases. Salivation I regarded as an indication of the full action of the medicine, and therefore hailed it as the harbinger of good. I did not, however, believe it to be necessary to success, —nay, I could have wished it excluded from its effects; and, under this impression, I never failed to expunge the mercurial from my prescriptions as soon as the rising of the pulse and the incipient restoration of heat to the extremities gave me reason to conclude that the object at which I aimed was about to be accomplished.

Calomel was the preparation generally resorted to by all classes of the profession, upon the principles, under the restrictions, and in the doses laid down by Chisholm and Johnson; and, before ptyalism was set up, which is so much insisted upon by these authors, seldom less than one hundred, often *hundreds*, of grains were accumulated in the system.*

In my own practice, I found that a liberal addition of camphor economised the quantity of mercury, not only by accelerating its effect through a stimulus at once general to the system, and local to the mouths of the absorbents along the digestive tube, but also by exerting over the purgative and griping effect of calomel a controlling power second only to that of opium, if indeed it be not altogether equal. My common prescription, therefore, after unloading the bowels, was two scruples or half a drachm of calomel, with half a drachm or a scruple of camphor, divided into twelve pills, and of these two were directed to be taken every second, third, or fourth hour, till some marked improvement was observed. No practitioner, however, who deserves the name, would blindly pursue one determined system in the teeth of conflicting indications; and it is therefore scarcely necessary to state, that this plan was in each instance modified or assisted internally by such of the simpler articles of the materia medica as circumstances seemed to render advisable; and that externally the warm bath and frictions, blisters and sinapisms, were assiduously called in aid for the purpose of soliciting the blood from the viscera to the surface. But I must not omit some special notice of the lancet and bark, lest I become amenable to a charge either of ignorance or neglect.

After many successive deaths had rendered the alarm general, and application was made for assistance at the first onset of the disease, a single bleeding, to its fullest effect upon the circulation before the orifice was closed, was uniformly successful either in at once putting the symptoms to flight, or in so modifying their subsequent character, that the identity of the attack with the prevailing epidemic was hardly to be recognized.* At a later period, too, advantage appeared sometimes to follow venesection, or, more frequently the abstraction of a few ounces of blood from the temporal artery in urgent affections of the head; but, taking the sum of my experience on this and other occasions, I could wish to make it the means of impressing upon my junior brethren in the West Indies, that much danger is incurred by using the lancet too hastily after fevers of any kind have at all advanced in their course. It is further of essential importance to remark, that, when the type under review is the subject of treatment,

---

* "In conjunction with cold thus remedially directed, calomel, in every severe case, and in every stage of the disease except the last, was largely exhibited. In some of those whose terminations were fortunate, from 300 to 500 grains were exhibited; and in no case did its conjunction with the cold treatment appear either during the illness or convalescence of the patient to have been injurious. From five to twenty grains, according to the age of the patient, or the severity of the attack, were given in pill or powder, combined with pulvis aromaticus, or the aromatic electuary, every two, three, or four hours, until the bowels were freely evacuated, and the system effected, or until perseverance in the remedy was evidently unavailing. This practice was eminently successful, although cases did occur where even salivation, though early induced, could not avert the fatal termination of the malady."

See an admirable history of the malignant epidemic which raged in the island of Montserrat in the year 1821, by Richard H. Dyett, M. D. published among "Facts and observations in refutation of Sir Gilbert Blane's doctrines as to the contagious nature of Yellow Fever, by A. Musgrave, M. D. of Antigua." Med. Chir. Review for March 1824.

* This alteration of type under the operation of remedies affords one among the many proofs, that all these varieties of fever are only links of the same chain.

and the propriety of bleeding is considered with reference to the duration of the disease, this duration must be reckoned, not from the last chilly fit which ushered in the persisting symptoms, but from the first intermittent paroxysm, however slight it may have seemed to the patient; for by the latter, which is the *correct computation*, the third, fourth, or fifth day may have arrived before a careless observer would suspect that any thing like serious indisposition had commenced. When matters have unfortunately gone thus far before we are made aware of the real danger of the attack, it is now my steady conviction, that it will be invariably more judicious to confide the safety of our patient to calomel and camphor, with due regard to purgatives and external adjuvants, than to risk an attempt to move the supervening congestion, however menacing, by bleeding. The indications at this period are beyond measure fallacious; and, if a vein be imprudently opened, it will too probably happen that the distress, whether general or local, which prompted the measure, may indeed appear to subside, and the practitioner be induced for a time to congratulate himself on its success; but, before or soon after the arm is tied up, a copious sweat will break out, which, becoming more and more profuse, with a corresponding sinking of the pulse, the patient will expire within twenty-four hours, in perfect possession of his mental faculties, and complaining of no sort of uneasiness beyond that which is inseparable from dissolution. I could wish it to be also remembered, that the same unexpected sinking may be the consequence of venesection, even at a much earlier period of *intermittent* fevers, provided a spontaneous solution of the paroxysm be on the eve of taking place; for I have seen more than one remarkable instance where the constitutional effort to throw off the heat by perspiration, co-operating unluckily with the powerful relaxation which follows the loss of blood, proved sufficient to reduce the patient to an alarming and even irretrievable state of exhaustion.

It is doubtless difficult to understand—to me it appears nearly inexplicable,*—why a cause, which dissection afterwards shows to have operated by a process of local disorganization, should, in the first instance, manifest its action under the mildest and most harmless form of fever, with periods—as far as the eye, the touch, and questions can detect—of *complete* intermission; and yet that the progress of the structural mischief—if we may judge from the aggravation of each successive paroxysm, and the sometimes inconceivably rapid termination of the last in death,—should continue, without interruption, during these apparent cessations even of functional disturbance. Perhaps, too, it is not the least surprising fact connected with this point, that bark, a remedy to which we are in general so little disposed to commit visceral inflammation, should, under such circumstances, manifest its accustomed power; for whenever we had an opportunity, during the epidemic under consideration, of putting this power fairly to the test, we certainly had no reason to be dissatisfied with the result. Three cases I particularly remember, in which the paroxysms, (not congestive, however,) continued to recur after ptyalism was distinctly brought on, and yielded at last, or appeared to yield, to a drachm of the powder given in a wine-glassful of the decoction, as often as the stomach could bear the dose, during the absence of fever. Unfortunately we had not then procured the sulphate of quinine, of the superiority of which, over every other preparation, I have since obtained highly satisfactory proofs, by extensive trial of its effects.

These last cases, I may remark, are in utter discordance with that *dogma* which assumes the absolute incompatibility of the febrile with the mercurial action; but I do not apprehend them to be equally irreconcilable with the idea I have myself adopted of the salutary operation of the latter. At any rate, it is sufficient to know that similar occurrences are incalculably rare, nor can I see why the maxim of law, that "Exceptio probat regulam," should not also be extended to medicine.

But I find that this subject has already led me too far from the professed object of this letter, and I shall therefore only add, that during about ten weeks that this epidemic prevailed, I had occasion, among my own patients, to treat *fifty-nine* whites and *fourteen* coloured persons. Of the former *six* died, of latter *two*. In consultation I saw *thirty-five* cases, of which *fourteen* proved fatal, making an aggregate of 109 cases, with twenty-two deaths, or a proportion of about *one* in *five*.

Our cases among the *slaves* must have more than doubled this number; but as they fell chiefly under the care of Dr. Sheriff, now of Dominica, except when alarming symptoms demanded my personal superintendence, I have preserved no accurate memoranda of that class. Some fatal terminations occurred here also, but by no means in equal proportion to those I have referred to, among the white and coloured inhabitants.*

Next in importance to fever, in Antigua at least, is the *St. Anthony's Fire*, as it is there

---

* M. Dufau, in his paper on "Intermittent Irritations," has communicated to the profession some interesting facts, but he has by no means *explained* them. (Journal General de Medicine. Med. Chir. Review, April 1827.)

* It may be as well to suggest that, by noting the greater mortality among the consultation cases, I cannot have the slightest intention to insinuate that my own treatment was more judicious than that of my brethren, as these cases were divided among many practitioners, and must obviously have been an aggregate of the most unpromising on the list of each.

generally denominated; the *Rose; Erysipelas;* the *Elephantiasis* of Hillary; the *Glandular Disease* of Hendy, or, as it would be more correctly termed, the *Migratory Inflammation of the Lymphatic System.* This alteration of the name would have the advantage, always desirable, of comprehending the pathognomonic feature of this singular affection—I mean its tendency to metastasis—which has not hitherto been sufficiently noticed. Indeed, the St. Anthony's Fire has always appeared to me to be as completely a constitutional disease, as dependent upon a peculiar diathesis, and as prone to migration, as gout itself. Like gout, too, I believe it to be the offspring of causes in some instances hereditary, in others, derived from the habits or circumstances of the individual.

An inexperienced practitioner, who sees this complaint in its acute and early stage, would have some difficulty in conceiving it to be the first link in that chain of morbid alterations of structure, which terminates at length in the unseemly Barbadoes leg—the *bucnèmia tropica* of Mason Good. Its first invasion—and the accession may be repeated under a similar form for a considerable period—is announced by very severe rigours, speedily followed by febrile heat, so pungent, that I have often been able, from these circumstances alone, to predict the supervention of the distinctive inflammation, even when the individual had never before been subject to its attacks. This inflammation, sooner or later, within forty-eight hours, (if not primarily affecting the viscera,) betrays itself in the scrotum, the mamma, or some part of the extremities, most frequently about the ankle, or high up the leg among the inferior glands of the groin.

Although commonly circumscribed at first, it not unfrequently diffuses itself over the whole limb, or even extends to the contiguous surface of the trunk; and when the glands themselves are not involved, indurated cords, extremely painful to the touch, can be traced to the nearest cluster. But whatever may be its original seat, the patient is never secure, while the constitutional disturbance subsists, from a sudden retrocession to some vital organ. I have seen it, in the same case, translated from the scrotum to the head; from thence, after a few hours, descend with the rapidity of lightning to the abdomen,—again migrate to the chest, to return perhaps to the encephalon, and prove fatal there;—or, under more favourable circumstances, resume its comparatively harmless situation, and run its subsequent course as if nothing untoward had occurred; and, while occupying the different cavities, giving rise to the ordinary symptoms of acute inflammation of that particular viscus which it had selected for its temporary abode.

Now, long before my time in the West Indies, the best informed practitioners had ascertained, by experience, that, in addition to warmth locally applied, and the ordinary purgative and febrifuge medicines, mercurial saturation of the system was the best means of securing the patient against this erratic disposition; and, accordingly, ptyalism was the usual companion of convalescence from an attack of this very common complaint.

As all young men ought to do, who have not unexceptionable motives for an opposite line of conduct, I adopted the practice of my seniors, and have never had cause to question the correctness of their conclusions; for I remember no case of fatal metastasis after swelling of the gums had been unequivocally observed; a subsidence of the constitutional symptoms having invariably either preceded, or been simultaneous with this effect, even when the local inflammation has continued a course which terminated eventually in suppuration. I am, indeed, strongly disposed to believe, that, since the mercurial treatment has become general, the number of cases ending in a local and permanent deposition of lymph has been materially lessened; as I could name many individuals subject to this disease, affecting the leg, the thigh, or the scrotum, whom I have attended for a number of years, and who yet continue to shake off each successive return, without retaining the slightest trace of its having existed; or, at worst, with a trifling induration of the inguinal glands. One excellent gentleman I have particularly in view; because his life being infinitely valuable to a numerous family, the case gave me more than ordinary anxiety.—I found it necessary to subject him to the influence of mercury, twice or thrice annually, from my first arrival in Antigua; for attacks of this kind, placing his life in jeopardy by their sudden transition from the groin to the head or abdomen: but, up to the time of my leaving the island, he nevertheless remained exempt, during the intervals, from the usual indications of this unlucky diathesis; and, what is more, without either *nodes* or *bone-aches.* This must be deemed peculiarly fortunate in the case of a married man; as, otherwise, injurious doubts might have arisen, whether occurrences so suspicious were to be attributed to me, or not rather to indiscretions of his own.

Before leaving this subject, it may be proper to remark, that, after experience had given me confidence, I was induced, when either of the great cavities was implicated, to have recourse to the lancet more boldly than was sanctioned by some of my brethren, whose opinions I respected; their objection being founded upon the idea, that the inflammation was *erysipelatous,* and therefore prone to assume under depletion, a low gangrenous character. But, to say truth, even admitting the force of an objection, which is now, I believe, but little regarded, I am by no means quite sure that the phlogosis in question bears the supposed analogy to erysipelas. At all events, the redness differs little from that of phlegmon, and suppuration under the form of genuine abscess is an extremely common occurrence; while, on the other hand, external gangrene is rarely, and vesications are almost never observed.

Next in the order I have adopted comes the *Dry Belly-ache* of our islands, or that peculiar form of colic for which I have proposed to substitute the more descriptive term of *Hepatic Ileus.* But, for the results of my experience in this disease, I must refer you to a paper of mine already before the profession, in which many points are considered, which bear closely upon the subject of this letter.*

I must not, however, omit to mention, as highly illustrative of what I am anxious to prove, the case of an old pupil of mine, who, under my own management, was salivated seven times within the years 1822 and 1823, for as many alarming attacks of this complaint;—yet I apprehend it would sorely amaze that gentleman, as it most unquestionably would me, were he to find himself, on that account, losing his nose or his palate,—suffering under cutaneous ulcerations, deep and foul—or graced with the corona veneris.

Nor can I help noticing the singular corroboration of my views, with regard to the efficacy of mercury in dry belly-ache, to be deduced from the reports of M. Laennec, at La Charité for 1825, as condensed in the same number of the Medico-Chirurgical Review, in which a favourable analysis of my paper also appeared. "A young man was under treatment for colica pictonum, but apparently with little success. Meanwhile an unequivocal peritonitis supervened, and the usual treatment of La Charité was instantly suspended; leeches were applied to the epigastrium, which gave momentary relief; large mercurial frictions were quickly employed, (half an ounce of strong mercurial ointment daily,) and, on the fifth, ptyalism arose, and continued more or less for a month. From the moment salivation appeared, every other symptom of disease disappeared, 'Mais le malade se trouva parfaitement gueri, et de la peritonite, et de la colique de plomb, dès qu'il eût commencé à saliver.' It has long been known," adds the London Reviewer, "that mercurialization arrests the colica pictonum, 'and that it is no mean antidote to peritoneal, or indeed any other visceral inflammation, whatever may be the scepticism of some practitioners who are blinded by prejudice,' or, according to M. Laennec, 'ce succes des frictions mercurielles, dans un cas aussi grave, prouve assez, combien elles meritent de confiance dans le traitement de la peritonite.'"

I anticipate the objection, that this mode of treatment comes badly recommended, when I acknowledge it to have given such transient relief, and to have been so repeatedly necessary, in the instance to which I just now adverted. But this objection would be more specious than valid. Let me therefore at once obviate it by stating, that the gentleman in question was obliged, by circumstances, to continue his residence on the estate where he had originally contracted the disease, and where his brother had previously fallen a victim to it,—that during each illness he was, by my advice, removed to St. John's, and returned after recovery only to sustain another attack within a very few weeks;—but that the moment he was permanently removed to a distant part of the island, his convalescence was, as I had predicted, not only complete, but lasting. He has since been a student in Edinburgh. I had the pleasure a few months since of taking him by the hand in London; and he is now in perfect health assisting his brother, a practitioner at Kensington. This case was prominent among those to which I have elsewhere alluded, as convincing me of the influence of local causes in the production of dry belly-ache.

The application of mercury to the cure of *Liver complaints*, whether affecting the structure or functions of that organ, is so generally known, that it would but exhaust your patience, were I to do more than remark under this head, that the manner of prescribing the blue pill and inunction, in chronic derangements of the abdominal viscera in general, furnishes an example of the use of the remedy more analagous to the management of syphilitic cases than its bolder exhibition on other occasions. I shall therefore pass on to

Tetanus, another most important disease, in which, after a greater share of experience than I wish to have again, of almost every mode of treatment which has yet been proposed, I have for some years placed considerable reliance on large doses of calomel, in combination with opium and camphor, preceded by copious blood-letting, when not forbidden by circumstances, and aided by active purgatives, and the external treatment which I shall immediately have occasion to mention. During the course of my professional career I have had the satisfaction to see numerous recoveries from the most aggravated degrees of the traumatic form of this complaint. Whether *post* or *propter*, with reference to the remedies employed, it may be competent to any man to question. But when we contemplate, without prejudice, the Herculean weapons which have been wielded in these struggles, between the physician and the disease, if we are sceptical enough to doubt their agency in the *cure*, we cannot choose but wonder that they failed to *kill*.

As a recent example of the practice to which I allude, and of its *occasional*, I would I could say its *general* success, I may sketch the case of a stout young negro, John Dickman, a slave of Captain Thomas Clark. This man, in the course of his duty as a seaman, on board a small coasting vessel or drogher; had his right hand extensively lacerated by a haul-yard drawn through it with great velocity, by the accidental falling of a heavy weight, to which the opposite end of the rope was attached. The flexor tendons were denuded

* Observations on the Nature and Treatment of Dry Belly-ache, by A. Musgrave, M. D. London Medical Repository for November 1825; and Medico-Chirurgical Review for January 1826.

and severely bruised, and the distal phalanx of the middle finger was forcibly torn away. Tetanic symptoms supervened on the 10th, and assistance was demanded on the 11th day from the accident.

The patient fell chiefly under the care of Dr. Furlonge, who then practised with me, but was often seen by myself. He was blooded twice to syncope on the first day; and a blister was afterwards applied, extending from the sacrum to the occiput, and was not allowed to heal. The wound, after a free division of all partial adhesions, was dressed with equal parts of the oil of turpentine and laudanum, applied on caddis, which was frequently changed, and covered with a large warm poultice; and frictions were diligently instituted about the jaws, the neck, and epigastric region, with a strong anodyne liniment, or powdered opium, rubbed up into an ointment with lard. Active purgatives (such as the *Ol. Terebinth*, when the powers of deglutition permitted; the pulvis jalapæ comp. with croton oil, suspended in cinnamon water, or castor oil following upon an uncombined ℈*i.* of calomel) were also occasionally interposed and quickened when necessary by stimulating clysters. But the prescription which was assidiously persevered in, from the 6th to the 15th of the month, (or for ten days inclusive,) was ʒ*i.* of calomel, ℈*ii.* of camphor, and ℈*i.* of opium, with the due proportion of conserv. ros. divided into six boluses, of which he took one at various intervals, ranging from one to four hours, according to the urgency of the spasms, till he had consumed the amount of *ten* such formulæ; and, adding the quantity given with the purgative medicines, I find, on consulting my notes, that 670 grains of calomel were prescribed for this man within the short period I have specified. Some allowance must doubtless be made for waste in administering the boluses, in a case where the difficulty of swallowing was sometimes as alarming as inconvenient, from the violent spasms which convulsed the muscles about the throat. But a more resolute fellow I have never had occasion to treat. I have seen him pause over a dose till he was enabled, as it were, to take the spasms by surprise, and then suddenly gulp the bolus with success; and in this way an enormous accumulation must, after every deduction, have taken place in the system. Yet, it is very remarkable that, while reckoning at best upon a frightful ptyalism as soon as the constitution had resumed its obedience to ordinary impressions, I was both delighted, and beyond measure surprised to find, that perfect recovery was established, without even a swelling of the gums.

I cannot pretend satisfactorily to account for an exemption which, to a similar extent, I have never observed on any other occasion. But let me suggest by the way, that by far the greatest accumulation of mercury took place during the first four or five days. The intervals between the boluses are noted after that period as considerably lengthened by the interposition of one or more doses of laudanum; and when the mercury was entirely omitted, it was deemed advisable to continue the laudanum for several days, so as gradually, not abruptly, to withdraw its effects. Is it not possible, therefore, that the susceptibility of the system might have been thus kept under control, till, by channels, remote from the salivary glands, all remains of the mercury had been completely eliminated?

As the judicious interposition of the lancet renders the system more obedient to the influence of mercury, so undoubtedly does mercury, in combination with antimony and opium, obviate the necessity of recurring again and again to the lancet; and hence, by skilful management, we can secure to ourselves the co-operation of "the right and left hands of medicine," so that they may be made mutually to spare each other, by giving and receiving assistance in opposing the ravages of acute disease. This is indeed an advantage of the highest importance, for I know of no practice more fraught with peril to the patient than that of *reiterated* bleedings. No man who has been accustomed to meet me at the bedside will be disposed to question my firm reliance on the salutary powers of venesection, when prescribed at proper stages. Few, perhaps, have drawn larger quantities of blood than I have within a given period. Yet I unhesitatingly express my conviction, that in enteritis, pneumonia, and (with reference to this last point) I may add apoplexy and injuries of the head, many an individual has been hurried to the grave merely because the student is taught that blood-letting is the *sine qua non*, the *unicum remedium* on these occasions, and therefore, on entering upon practice, knows not what else to do. Surely, after having emptied the vessels to a reasonable extent without success, we can at worst only lose our patient by giving nature a little play, whereas, by farther interference, we shall too probably be at once deprived of all chance from her *vis medicatrix*, which ought never to be held in contempt. Several times has an unlucky third or fourth bleeding appeared to me to accelerate and enfeeble a tolerable steady pulse to a degree from which it has gradually proceeded to entire extinction; and, although the effects of this kind of exhaustion have presented themselves to me under a form somewhat different from that which has been described by Dr. Hall,* I am still gratified to observe that the attention of the profession is likely to be more pointedly turned, by his remarks, towards a species of danger which has been hitherto not sufficiently appreciated.

But I have dilated too largely upon the diseases which have already passed under review, and it therefore becomes necessary that I now bring the list to a close, by comprising in few words, that in *dysentery*, *rheumatism* of every kind, and all *acute inflammations*, whe-

*Medico-Chirurgical Transactions, Vol. xiii.

ther of the head, chest, or abdomen, which assume a menacing character, calomel and opium, with emetic tartar or camphor, or both, are very commonly relied upon after, or in conjunction with, blood-letting, purgatives, and blisters; and that the tropical practitioner, who is unacquainted with the influence of alterative doses of mercury over those *ill-conditioned sores* (not venereal) to which the slaves are occasionally liable, is ignorant of the most effectual means of affording relief to a very important class of his patients. With such doses, and a regulated diet, these ulcers will yield to the simplest dressings;—without them the pharmacopœia chirurgica may be exhausted in vain.

I believe you are aware that in my part of the world we have no professional distinctions. We are all of that class which, in Great Britain, would be denominated *general practitioners*, that is to say, we prescribe, we amputate, or have recourse to the forceps or crotchet as occasion may require; with this disadvantage, however, that, in obscure or difficult cases, we are without appeal to those who have exclusively devoted themselves to either branch of practice. This state of things obliges each member of the profession to keep an establishment for dispensing his own prescriptions; and it hence occurred to me, as soon as my thoughts had been turned to this subject, that I might render the weight of my individual testimony respecting the unmixed effects of mercury on the system more definitely appreciable, by ascertaining the quantity of its different preparations actually consumed by my own patients, or those of my partners or assistants under my immediate inspection, from the time of my first embarking in practice to the present day. I accordingly wrote to our druggists, Messrs. Gordon and Graham of Oxford Court, Cannon Street, London, with whom I have corresponded during the whole period, requesting a reference to their books, and a memorandum of the amount of their shipments to Daniell and Musgrave, to myself, and to the existing firm of Musgrave and Crichton; and, by their letter of the 10th of April, I find that, from the latter end of 1814 to the year 1826, they have actually supplied, to these several addresses, 111 pounds of calomel, 61½ of blue pill, and 131 of mercurial ointment; the average consumption of the last four exceeding, as might have been anticipated, that of the eight preceding years; being about twelve pounds annually of calomel alone. It must be remembered, besides, that my experience has been by no means confined to the quantity dispensed in my own establishment, for I have always been a good deal engaged in the cases of others; and, indeed, for many years, the consultations throughout the island have been almost entirely divided between my friend and partner Dr. Crichton and myself, both before and since the junction of our interests, which took place in January 1825.*

Looking, then, upon the formidable catalogue which I have thought it advisable to submit for consideration, with the evidence now adduced of the quantities of mercury I have seen expended in treating the diseases which this catalogue embraces, can you hesitate to concede to me a right which you would doubtless, in my place, claim for yourselves—that, namely, of inferring,—if not the absolute *impossibility*,—at least the extreme, the almost inconceivable *rarity* of occurrences which could altogether have escaped the most watchful observation, during the period, and under the circumstances to which this letter refers? And assuming a concession which cannot, I apprehend, be consistently withheld, may I not confidently go farther, and ask of those who believe in the pernicious influence of mercury on the bones and their periosteum, the throat, and the skin, how this belief is to be squared with the assertion which I now unequivocally make,—in terms and by facts which court publicity, in order that they may be rebutted if possible by the testimony of others,—that I have never either seen or heard of a case where symptoms, bearing the stamp of secondary syphilis, in the common acceptation of these words, were even *suspected* to be the offspring of mercury administered for the cure of any other disease,—that the *only bones* I have ever seen, either immediately or ultimately, affected by the most aggravated cases of mercurial mismanagement, were those of the upper and lower jaw, whose vitality might have been partially destroyed by a process of denudation, caused by extensive sloughing within the mouth, which involved their periosteum,—and that the sole injury I have had occasion to notice after recovery from excessive ptyalism, which could even *by supposition* be connected with any but the two bones I have mentioned, was on one occasion a paralysis of the *portio dura* of the right side, producing that peculiar effect upon the countenance, so well described by Mr. Bell? This paralysis, however, evidently arose from the thickening of some portion (probably the lining) of the canal, through which that nerve passes from within the cra-

* I am not insensible to the danger I incur, by publishing this statement of particulars, of being regarded, by the less charitable among my brethren, as destitute, either of *principle*, in grossly misstating facts, or of *judgment*, in sanctioning such abuse of a remedy, which, even by my own showing, is open to numerous and heavy objections. I must therefore acquit myself of either imputation, by observing that, independently of private practice, the medical care of a very large number of slaves attached to estates, as well as of the Colonial Hospital, and poor of the most populous town and division of the colony, gave me, from the very commencement of my career, the superintendence of a greater proportion of sick than can fall to the lot of any but those in charge of large hospitals in this part of the world.

nium to the face, caused by inflammation extending to it by *direct continuity* of parts.*

Having thus proved as clearly as the nature of the question admits, that, from the numerous objections which may fairly be urged against an abuse of mercurial medicines, we must exclude all apprehension of constitutional injury to the bones, under any circumstances whatever, when the venereal virus does not contribute to that injury; I must now endeavour to convince you and your readers, that the latter is abundantly capable, without foreign assistance, of giving rise to those extreme cases, which have been the chief source of discordance among medical men; for if it be not so, then I am yet to learn how several which I have met with among the slaves are to be rationally explained.

The promiscuous intercourse indulged in by our black population is, I believe, sufficiently notorious, nor am I sanguine in hoping that they will be speedily prevailed upon to lead more regular and creditable lives.* But the younger women have, nevertheless, a certain character to support. Many of them are ambitious of forming temporary connexions beyond the class in which they live, not improbably with the white persons on their own or the neighbouring estates; and hence it is not difficult to appreciate the reluctance which they must naturally feel to expose themselves to neglect or disgrace, by applying at the public hospital or sick-house for relief. The consequence is, that they consult nobody till matters are too far advanced to be longer concealed from those more immediately about them. Even then, however, with the entire concurrence of the seniors of the family, the requisite assistance is sought for, not from the medical attendant of the master, but at the hands of some black and veteran Æsculapius on the property; for we abound in such characters, both male and female, eager to undertake by *bushes* the cure of complaints, which they contend are less successfully managed by the licensed practitioner. The necessity this concealment enforces of laborious exposure to the vicissitudes of weather, added to the continued use of their favourite diet, into which salted meats and fish always enter, as largely as their means will allow, produces a daily augmentation of evil, till at length the poor woman presented for treatment, sometimes with ragged ulceration of the throat, accompanied by caries of the bones of the palate and nose; at others with nodes and bone-aches, cutaneous blotches; or, to be brief, with any of the infinite variety of appearances which it would be superfluous to enumerate here.

It will readily be granted, on my part, that the imperfect history almost always obtained with cases of this kind, in which we are often gravely assured that the unhappy girl is yet a stranger to sexual intercourse, precludes our arriving at absolute certainty that no mercury has been previously used; but when we re-

---

*"Dr. Thompson (Henry) has served in hot climates, and he acknowledges that the affections of the bones, attributed to mercury, 'very seldom take place;' but that they *never* happen 'he is *convinced* is not the case.' Now, to this we would reply in the words of the lawyer in the play—'No *convictions*, Sir; stick to *facts*.' Dr. Thompson does not produce a single fact, nor does he assert that he ever saw a case of the kind. He is *convinced*, however, that they do occur, because 'it is consonant to *reason* that they should.' Again, we say, 'no reasoning, stick to facts.' For our parts, we have seen at least *some thousands* who had undergone courses of mercury for dysentery, hepatitis, fevers, &c. and yet we cannot charge our memory with a *single* instance in which diseases of the bones were the consequence."—See Johnson's *Med. Chir. Review*, Vol. ii. p. 621.

"It were easy for me to refer to numerous cases similar to the above, but at present this appears to be totally unnecessary; for while rotten bones have long been considered as the legal inheritance of those who have suffered much from venereal disease, I am not aware that a *single instance* has yet been brought forward of mercury producing a similar affection of the bones, when exhibited for the cure of any other disease than syphilis; and until well-marked and unequivocal cases of this kind shall be produced, those who advocate the utility and safety of mercury are not bound to obviate an objection to its use, which has not been proved to exist."

Remarks on a syphilitic Cranium by George Ballingall, M. D. F. R. S. E. Regius Prof. of Military Surgery, &c. &c. &c.—Edinburgh Medical and Chirurgical Transactions, Vol. i.

Here then we have the testimony of two practitioners from the *East* (for I presume the reviewer first quoted to be Dr. Johnson himself) added to mine from the *West* on a point, regarding which it is really difficult to conceive how a doubt could possibly have arisen.

*I must not, however, deny myself the gratification of stating, that the most active arrangements are now in progress, through the zealous influence of our excellent and distinguished Bishop, (independently of the valuable labours of the Moravian missionaries, who receive an annual stipend from the colonial treasury) for spreading moral and religious instruction among the slaves; it is therefore to be hoped that a reformation in this respect, however slowly it may proceed on account of the inveteracy of habit, will at length be effected; more particularly as every encouragement is offered by the proprietors themselves to fidelity in their connexions. The morals of the next class, the coloured inhabitants, have been wonderfully improved within the last fifteen years—an improvement which must, in candour, be ascribed chiefly to the laudable exertions of the Methodists, who have hitherto conducted themselves, in Antigua, with marked propriety.

flect upon the powerful motives which have prompted concealment—the difficulty of obtaining the necessary medicines, even if these people knew how to use them—and the fact, that the sore mouth is the principal object of dislike, it appears to me to be the extreme at once of credulity and scepticism, to suppose that mercury could, by the most remote possibility, have contributed to the existing symptoms.

To the evidence previously adduced of the impotency of mercury in this respect, I have now added strong testimony of the intrinsic power of syphilis to generate the injuries in question to an unlimited extent; but I must not yet quit the subject without giving the outline of a case, which, as far as one case can be permitted to guide our opinions, places beyond all cavil the conspicuous effect of the former in arresting the most threatening assemblage of symptoms, when administered with proper precautions.

A gentleman resident in London having had occasion a few years since to visit the West Indies on business of consequence, proceeded to Falmouth to join the packet.—There he had connexion with a chambermaid; and the product of that connexion was a chancre, discovered during the first week of the voyage. He was an elderly and a married man.—Even the kind of duty in which he was engaged rendered his moral reputation a matter of the last importance; and more especially, as he had heard something of the new opinions regarding syphilis, he determined resolutely to keep his own counsel. He dressed the chancre with cold cream and lint; and having on board with him six calomel pills of a single grain each, which some sapient adviser had directed him to take on his approach to the tropics, as a preparative for the climate, he at once consumed them, at intervals of a day or two between each; without deeming it necessary, however, to abstain from the good cheer which was daily provided for the table. The chancre healed kindly enough, but not before a bubo had appeared in the groin, which he permitted to take its course. It suppurated, and, before he reached Barbadoes, not only broke, but assumed an angry appearance. He was now a miserable man, and mental distress conspired with bodily annoyance to injure his general health. He became sallow and emaciated. The sore gradually got worse; and yet the dread of exposure kept him obstinately silent, till six weeks afterwards, when he arrived in Antigua, and applied to me in despair.

I shall not readily forget how shocked I was when the groin was submitted to my inspection. It presented a phagedenic bubo of the most alarming description, the ulceration being exceedingly deep, and spreading from the whole extent of Poupart's ligament, upwards to the old spot for tapping in ascites, and down the thigh about two inches and a half. The gentleman's strength was materially reduced, and I was literally at a loss in what manner to proceed. The following plan, however, was, after due deliberation, adopted.

In the first place I endeavoured so to regulate his diet as to meet his debilitated condition without fomenting the mischief. Half a drachm of strong mercurial ointment was then directed to be rubbed into the thighs thrice a-day, and five grains of blue pill, with a full dose of opium, to be taken every night at bed time. The sore was carefully bathed at proper intervals with the sol. sulph. cupri. comp. diluted according to the sensation produced. Caddis dipt in the same was laid on it, and the whole covered with an emolient poultice. The bowels proved so irritable that the blue pill was occasionally suspended, —but I need not follow up the minutiæ of the case. Suffice it to say that the requisite caution caused the saturation of the system to be more tardy than was desirable, and on the sixth day from my first visit, not only had no improvement on the sore been made manifest, but incipient ulceration was discovered in the throat. This, as may be imagined, rendered me doubly anxious to arrest the progress of the symptoms, and I accordingly gave, but not without occasional hesitation, a second pill daily, and increased the original quantity of ointment to ℈ *ii.* at each friction. On the fourteenth day, however, the mercurial fetor betrayed itself—the gums began to swell—and it is no exaggeration to assert, that from that moment the aspect of affairs was entirely changed. The throat healed rapidly; the circumference and depth of the horrid ulcer I have described were daily lessened to a degree which delighted the patient and astonished me; and in three months from his landing in Antigua he again embarked, after having gradually regained flesh, strength, and spirits, with no trace of his misfortune but an ugly cicatrix in the groin. The circumstances of this case must speak for themselves. They require no comment from me, except this, that the manner in which I came by the occurrences, which preceded my personal interference, precludes the most distant suspicion of any thing like want of candour, in the detail which I received from my patient.

Here then are "*factis contraria facta.*" I cannot, of course, doubt the accuracy of my own assertions, and I distinctly profess an equal conviction of the correctness of every thing advanced, as the result of observation, on the other side. But the discrepancy is more apparent than real when the *facts* are considered. It is in the *conclusions* alone to be deduced from these facts that I am in any manner opposed to the prevailing opinions. The comparative mildness, for example, of the secondary symptoms, after the non-mercurial treatment, on which every thing hinges, (which symptoms, however, are admitted to have shown themselves in a modified form under the very best management,) I have no hesitation in ascribing to the antiphlogistic regimen, aided by confinement and posture, which being so strenuously enjoined was, doubtless on these occasions, rigidly en-

forced. On the other hand, it does not require preconceived notions to convince me that the complicated ravages which so frequently present themselves, after reiterated courses of mercury, are the result of that miserable practice which still too generally obtains upon Mr. Hunter's authority, of allowing full diet and wine, while the patient makes no sacrifice of business, pleasure or exercise, during the cure of the primary symptoms. When we look back indeed upon the number of cases, in which this system has most probably been pursued, it becomes matter of wonder, not that bad consequences are occasionally met with, but that they have failed to occur in a tenfold ratio; and were I at this moment compelled to select between mercury with free living, and the antiphlogistic regimen with rest, as the irrevocable plan on which I was in future to proceed, I should have little difficulty in deciding upon the latter; but I should do so as the forced choice of two evils, being thoroughly satisfied that a judicious combination of mercury, with diet, confinement, and posture, will best secure that uniform and permanent success which alone can be satisfactory either to my patients or to myself.

In establishing the positions to which I pledged myself at my outset, it only remains for me to refer to the conclusive evidence extracted by Dr. Mason Good,* from the official records to which he had access by permission of the Director General, in proof of the extraordinary hebetude, as he calls it, of the syphilitic action in the West Indies, or, in other words, of the comparative infrequency of venereal cases, and particularly of those under a secondary form. The number indeed of these cases, which appear in the annual returns to have been afforded by the troops throughout the islands for a series of years, falls short of what my own experience would have led me to suppose; but the inference drawn by Dr. Good, is to a certain extent decidedly corroborated by general observation, and I must therefore leave it to acumen more pointed than I can pretend to, to explain away the facts I have adduced, and to reconcile this hebetude of action with the idea, that the unmixed effects of mercury and reputed syphilis bear the slightest resemblance or affinity to each other.

When commencing this communication, I fully intended to enter more at large upon the injurious consequences which really result from the improper use of mercury, than I shall now be able to attempt, on account of the length to which these desultory remarks have already extended. I must therefore confine myself in this place to briefly stating, that these consequences are sufficiently serious to render every prudent man circumspect in the exhibition of so active a remedy.

I am far, very far, from desiring to conceal that the immediate effects of mercury, are now and then appalling. I am only anxious it be at the same time remembered, that these effects are unmasked and *characteristic*, not insidious and lurking. I frankly acknowledge, so shocked and disgusted have I twice or thrice felt myself at witnessing the sufferings of a victim to the outrageous salivations which are occasionally brought on, that I have been tempted, under the impulse of the moment, to resolve that I would abandon the use of calomel forever. But to this acknowledgment must be added, that five minutes reflection sufficed to remind me that the example before me was but *one* opposed to one *thousand*,—that I must not disregard the overwhelming balance which daily experience enabled me to note on the other side. To conclude,—while I hold a resolution not hastily framed, and therefore commended to general adoption, never, without due consideration, to risk the supervention of ptyalism, and, when saturation of the system is really demanded, to proceed with measured doses, at regulated intervals, to as limited an accumulation of the medicine as the urgency of the danger admits; I am yet so conscientiously persuaded of the unrivalled power of this treatment in many of the most fatal diseases, that I must continue to prescribe it fearlessly, even at the peril of my reputation and income; and should I, on that account, be deprived of the confidence of those around me, I must be content to retire from the exercise of a profession, which demands of me the sacrifice of duty at the debasing shrine of self-interest.*

I have now, I believe, amply redeemed the pledge with which I prefaced these remarks, and redeemed it by an appeal to facts and arguments, which, being irrefragable, will, I trust, hold me acquitted of presumption in venturing to treat so confidently of these subjects. I am indeed ashamed to acknowledge the extent of the opportunities I have enjoyed for professional observation, when the glaring disproportion of my attainments can be so readily detected; and, had it been practicable, would gladly have

---

* Study of Medicine, Vol. iii. 394.

*"I have found, in the management of the mercurial treatment, a small quantity of mercury sufficient to excite salivation, and to secure safety; and I have known 6000 grains (including the frictions) required to effect the same object. Such is the uncertainty on one hand; such the necessity of the precept I have recommended on the other."

"Are we then, from any vain or unfounded apprehensions of this kind; from reasoning drawn from false premises; or from the suggestions of uninformed or prejudiced minds, to yield up the result of our own frequently reiterated experience—to relinquish the best aid we can bring to the support and relief of our fellow-creatures suffering under direful maladies? Forbid it, humanity! forbid it, truth! forbid it, Heaven!" Chisholm, Manual of Tropical Diseases, 1822.

confided this matter to an abler and more experienced pen. But my views are too unpopular in Edinburgh to be advocated by others, and I have therefore felt it,—I repeat—to be an act of indispensable duty, in return for the indulgent share of confidence awarded me where I practise, to raise my voice against the farther promulgation of doctrines, which have already gone too far in deterring the rising members of the profession from availing themselves of a remedy, which I firmly believe to have been in my hands, under Providence, the means of saving many an estimable life, and which the records of medicine, for the last thirty years, abundantly prove to have been equally successful under the management of others. In expressing myself thus earnestly, I have the satisfaction to reflect, that I stand personally absolved from all sinister motives; for, to vindicate as warmly as I have done the extensive, though circumspect use of mercury, would, even in our climate, be enough to blast the prospects of a man who had yet his character to establish. I have already adverted at some length to this subject in my paper on dry belly-ache; but it may be well to repeat, that it requires a degree of moral courage—of strict and unbending principle which all do not possess,—to enable us to persevere in the use of a remedy, however valuable, whose babbling effects, even in successful cases, will injure our reputation more than the last and worst result of ignorance or mistake. In the one case the coffin is consigned to the grave, and the man, his treatment, and his death, are speedily forgotten. In the other he lives, but either doubts or forgets the extent of his danger. While a trace of ptyalism remains, he dwells pathetically to his friends on the cruel sufferings he so needlessly endures,—and the loss of one useless tooth perpetuates our mortification and disgrace.*

It is indeed high time that the public be made aware how utterly groundless and untenable these prejudices are found in reality to be, when tried by that scale of experience which alone can be regarded as the test of truth. I am, Gentlemen, your faithful and obedient servant,

A. MUSGRAVE.

From the London Medical Repository and Review.

The Dublin Hospital Reports, and Communications in Medicine and Surgery. Vol. IV.—Cases of Diseases of the Heart, accompanied with Pathological Observations. By R. ADAMS, A. B. &c.

Mr. Adams gives these cases as the result of his own observation, and divides them into those which affect the coverings of the heart; some that are seated in its muscular structure; and others which take place in the *valves*, or, as he terms them, "the auricular and arterial openings of the ventricles."

The *pericardium* is the seat of certain diseases, and these may take place either in the inner or serous, or in the outer, fibrous membrane of which it is composed. Inflammation may take place in the former, as a secondary consequence of a similar affection of the pleura, which it resembles in its structure and use; but from the interposition of the outer or fibrous membrane of the pericardium between these, it is possible that extension of inflammation, from the one serous membrane to the other, is interrupted, and rendered less frequent than it would otherwise be. The existence of this affection, however, in both is perhaps not so uncommon as has been supposed. Mr. Adams has seen it extending (in consequence of external violence) to the serous membrane of the heart itself, involving all the intermediate tissues, from the integuments covering the external surface of the chest, to the enveloping membrane of the organ now mentioned.

This writer adds to the few cases of *ossification* of the fibrous membrane *of the pericardium* already on record, one which was detected in opening the body of a man who had perished by exposure to the fumes of charcoal. All the viscera, excepting the heart, were sound.

Pericarditis is seated in the serous membrane.

"The general signs by which the disease may be recognised are exceedingly equivocal, and much requires to be done by the physician to clear the obscurity. I have been frequently called upon to examine the bodies of persons supposed to have died of diseases of the lungs or liver; and I have found pericarditis the true and single source of death, although during the previous illness the heart was never suspected to be the seat of a fatal affection."

A case of a chronic nature is added, which terminated fatally; throughout the progress of which, the mistake prevailed that it was a phthisical disease—the seat of the disorder being supposed to be in the liver—which organ, on opening the body, was ascertained to be perfectly sound; although, from the pressure of a distended pericardium, it had been pushed forward so as to convey the belief that it was preternaturally enlarged.

Mr. Adams has seen many unequivocal cases of metastasis of *rheumatic* inflammation to the heart; and records one in particular, in which an acute attack of this disease left the synovial membranes of the extremities, to perpetrate its mischief in the serous membrane of the vital organ. The subject was a girl, only six years of age. The case we must altogether omit; but the pathological argument which follows, we present at length.

"It would appear that the distinction between simple rheumatism of the heart and the dangerous case of rheumatic inflammation, has not been sufficiently insisted upon. In

---

* Need I point out with what additional force these remarks apply to cases in which ladies are concerned?

the one case the organ is simply, and often but transiently affected, just as any other muscle is,—the person has perhaps been affected with rheumatic pains in the loins, with but little fever: these, suddenly leaving this region, run to the diaphragm, and cause a temporary affection of the breathing, with what the patient calls spasms in the chest. The countenance undergoes sudden changes; there are at such moments strong beats of the heart, and intermissions of the pulse sensible to the patient; and in females I have sometimes seen such attacks end in an hysteric paroxysm, and all symptoms subside when the lumber pains returned. In such cases, the tongue is somewhat foul; the skin is frequently relaxed by profuse perspiration, and the urine is remarkably turbid; but the pulse has neither the frequency, hardness, nor peculiar vibratory feel that it has in the other and more dangerous case: the countenance does not betray that anxiety, or, as it is denominated by some authors, that anguish, which it almost uniformly expresses when the membranes of the heart are affected with acute inflammation, from whatsoever cause proceeding. Although simple rheumatism of the muscular structure of the heart may occasionally pass on to carditis, or to an inflammatory affection of the serous membrane of the heart, there cannot be a doubt that the two cases are very distinct from each other, and require treatment so different as to make it highly important for the practitioner to be aware of the risk of mistaking the comparatively simple case of rheumatism of the heart, for the far more urgent and dangerous one of rheumatic inflammation of its serous membrane. The latter disease I have usually seen in children, and persons about and under the age of puberty, in whom metastasis seems much more liable to occur than in those more advanced in life; and the sudden translation of the rheumatic inflammation to the heart has usually occurred where the synovial system of the extremities was the original seat of the disease: when the muscles have been affected with acute rheumatism, metastasis to the heart has not, to my knowledge, been frequent, although I have seen the diaphragm affected by it in such a manner as to excite, apprehensions, for a time, that the former more important organ was implicated. There seems to be a greater disposition in the acute inflammation to pass from the synovial membranes to the serous, than to any other tissues, which is not so much to be wondered at, when their great similarity of structure, appearances, and functions, is considered."

Mr. Adams, from these cases of *rheumatic* metastasis is led to conjecture (for he does not profess to do more,) that *gout* also attacks this organ in an analogous manner. This sort of inflammation, however, seems not to have been much the subject of observation. Erysipelas, prone as we know it to be to change its seat, often affects the heart.

Among the morbid changes that are met with in the *muscular* structure of the heart, we have to enumerate, increase of thickness in the parietes, and enlarge ment of the cavities: both these deviations may be co-existent; and although the enlargement, &c. are commonly confined to one auricle or one ventricle, sometimes all the cavities are preternaturally distended, and the whole volume of the heart greatly increased, without any valvular disease. Cases of this nature, like diseases of the heart in general, commonly terminate in dropsy; but sometimes the progress of affairs is cut short by an apoplectic attack. Mr. Adams, in a case of this nature, found, upon dissection, that the heart was converted into fat.

The muscular structure of the heart is liable to rupture and to aneurism, by the walls of the ventricle (in which it occurs) giving way, from some cause not sufficiently known. At last the sac bursts, and instant death is generally the consequence. The cordæ tendineæ sometimes give way, and by so doing present a case which is beyond the reach of art.

We come now to "the arterial and auricular openings of the ventricles," which is a more correct method of denominating the parts in question than by the term valves; inasmuch as these are an apparatus placed in the said openings, rather than the openings themselves. Mr. A. describes them as liable to contractions, invariably combined with some cartilaginous or osseous depositions. The consequence of this morbid state is not only derangement in the circulatory, but also of the general system. Our author brings his own observation, as well as that of others, to qualify the assertion of Bichât, that the right side of the heart is never the seat of these concretions or depositions. The left side of the heart, however, is not only more frequently the seat of the contraction in question than the right, but the disease itself is probably of more frequent occurrence than is commonly imagined. It takes place at all periods of life, and as frequently in the female as in the male, though the sex is comparatively exempt from diseases of the heart and vascular system. The progress of this *auriculo-ventricular* contraction, until the opening between the cavities is reduced to a mere fissure, is gradual; and the patient sinks under a long train of suffering. The history, however, of two cases is given, in which the patients were carried off suddenly and early —one by apoplexy, and the other by epilepsy—both brought on by the difficult transmission of the blood through the left side of the heart. The patients were both females, about forty-five years of age. "In both," says the reporter, "we found the mitral valve and auriculo-ventricular opening in a state nearly similar, although the effects of this organic change was so dissimilar."

There is a good description of the changes found in the diseased parts after a fatal termination, for which we regret that we cannot

find room. We must, however, give one passage from this very able paper, of a physiological description:—

"Before I conclude these observations on the healthy and deranged action of the auriculo-ventricular valves, I may remark, that the mitral valve so perfectly closes the aperture of communication between the left auricle and ventricle, that in the natural state no reflux whatever is admitted: this, so useful at the right side of the heart, would have been not only useless, but injurious, at the left side of the organ, as we find the general arterial system at all times equally ready to receive the blood during the systole of the left ventricle; and if the mitral valve did not perfectly close the left auriculo-ventricular aperture, a great deal of the force of the aortic ventricle would be wasted, whereby it would be incapable of moving the mass of blood which was destined to fill the arterial system. Pathologists, in looking to the different nature of the lining membrane at the two sides of the heart, as a means of explaining the greater liability of the left side to disease, have perhaps too much overlooked this circumstance, that while, from the unyielding nature of the mitral valve, all reflux into the auricle is prevented from this very cause, which renders it effective in the circulation, it is exposed to more frequent injury—from which organic disease may arise, and the ventricle to which it belongs become more liable to be ruptured by its own efforts.

"However we attempt to account for it, the fact is undeniable, that rupture of the right side of the heart, and injuries and diseases of the tricuspidal valve, are as rarely as such accidents and lesions of the left side of the organ are frequently to be met with. I shall conclude the observations I had to make on the morbid contraction of the left auriculo-ventricular opening, by considering how far this obstruction in the heart can account for some of the other symptoms of that disease.

"The brain, the lungs, and the liver, more or less, feel the injurious effects of this obstruction to the free circulation of the blood through the left side of the heart; the former is oppressed by an undue quantity of blood, the quality of which is ill-suited to the function of the organ; hence the vertigo, and sometimes the sudden termination, by apoplexy or epilepsy, already alluded to. The lungs and the liver are better able to accommodate themselves to this local plethora, but their functions are more or less disturbed. Hence the dyspnœa, hæmoptysis, deranged digestion, and jaundice, which I have remarked in many instances. Lastly, the general capillary system suffers from a double cause; the circulation of blood through these vessels must be languid, because the impulse *à tergo*, which they can derive only from the left ventricle, is weak,—while there are numerous obstructions in front, but all arising from the one cause, namely, the contraction of the left auriculo-ventricular aperture. These vessels are probably relieved of their plethora through the exhalants, which open on the cellular membrane and serous surfaces,—hence the anasarca first, the ascites and hydrothorax last, the constant attendants on the final stages of this disease."

The remaining disorders described and illustrated by cases relate to the ossification of the valves of the aorta, to contraction of the *arterial* opening of the left ventricle, and to complete ossification of the coronary arteries.

Observations upon the Origin and Latent Period of Fever. By Henry Marsh, A.B., M. D., M.R.I.A., Assistant Physician to Steevens's Hospital, Physician to the Institution for the Diseases of Children, &c.—Although the period which elapses between the first impression of the efficient causes of fever and the full development of febrile action, has been too much and most undeservedly overlooked by writers and practitioners, yet it has not altogether been neglected. On the contrary, some few have considered this subject maturely and closely, both in their writings and in their lectures; and have practised what their views led them to, respecting it, most efficiently and felicitously. We shall not refer our author to those writers who have considered the present subject in a similar manner to himself. Nor is it very material whether or no his erudition have made him acquainted with them. The author has very properly observed for himself; and what he adduces in the present paper is a powerful support to the opinions and statements of those who have gone before him in the same path of close observation and pathological research.

Dr. Marsh proposes to consider in this communication—"first, the manner in which febrile disease is produced; secondly, the symptoms which manifest themselves during the latent period; thirdly, the treatment adapted to this stage of disease." These are important and not uninteresting topics; and, considering the limits within which the author has been restrained, they may be considered as, in some respects, very satisfactorily discussed. In its more important and wider relations, however, the present respectable attempt of our author can only be viewed as a contribution to that general information which we already possess, and not as a complete exposition of that state of system produced by the efficient, and, in many instances, co-efficient causes of fever; which state of system is of such importance as to lead to all the subsequent phenomena on which the name of fever has been imposed.

The first subject which Dr. Marsh enters upon is one confessedly of very great difficulty; and we do not find that he has diminished that difficulty, or grappled with it in earnest. Many of the positions, however, which he has taken up are evidently good; and his facts are important, although similar ones have always occurred to observing prac-

titioners, and have been duly valued by many, who, like himself, have made their observations subjects of reflection. Dr. Marsh commences with the statement of various cases—many of them interesting.

"1. A female named Doolan, aged twenty-four years, admitted into one of Dr. Crampton's fever wards in the Whitworth Hospital, on the 24th of November, 1817, gave the following account of the manner in which she had taken fever. The statement came from her voluntarily, and not in reply to any question put to her; and appeared to be the result of a strong mental impression which she seemed anxious to communicate. On the Wednesday preceding the day of her admission, a person not yet recovered from fever came into the house where she then was, and sat down close beside her. She became immediately sensible of a heavy disagreeable odour arising from the person of this individual, which disgusted her exceedingly; she was instantly effected with headach, and became so weak that with difficulty she could move her limbs or stand. That very evening, long-continued rigours came on, followed by heat, to which succeeded perspiration; she spent a restless night; slept in an agitated manner, and awoke unrefreshed. She was admitted into the hospital, labouring under the ordinary symptoms of fever in an intense degree; she complained of severe headach, great prostration of strength, and was covered with large and florid petechiæ: her fever was tedious, and her recovery slow.

"2. On Wednesday, the 17th of June, 1818, Nurse Smyth, in one of the wards of the Richmond Penitentiary, administered an enema to a patient labouring under typhus fever; while she was engaged in this duty, the bowels of the patient were suddenly evacuated; the smell issuing from the fæces produced immediate and most intense headach, and her strength, at the same time, was so completely exhausted that she had neither power to move nor to support herself on her limbs. In a few hours afterwards she was seized with a severe rigour; but being placed close to a large fire she became warm, yet not without occasional sensations of chilness, feeling as if some cold substance moved slowly along her back. Typhus fever, of a severe character, yet presenting no unusual symptoms, supervened. The patient to whom the enema had been administered died in two days afterwards, having exhibited the worst characters of petechial fever.

"3. On the 25th of June, 1818, Nurse Hayes, labouring at the time under a slight catarrhal affection, applied leeches to a person in the last stage of typhus, whose body was covered with purple petechiæ. While she was leaning closely over the patient, in the execution of this duty, he coughed, and the smell of his breath greatly disgusted her. Shortly afterwards she had a rigour, and felt as if cold water descended along the spine. For several hours subsequently there was an alternation of heat and chilness. She took an antimonial emetic, and perspired copiously: the fever which ensued was mild."

The following cases occurred in the persons of medical men, and are remarkably illustrative of the *modus operandi* of the contagious miasm, as well as of its effects.

"8. Dr. Crawford, one of my fellow-labourers at the hospital of the House of Industry, during the prevalence of the epidemic fever of 1817 and 1818, gives, in his Thesis, the following account of the manner in which he himself became affected with fever:—'On entering a ward very early in the morning, where lay a woman labouring under the worst description of fever, as I approached the bed, I perceived a disagreeable fetor, and was instantaneously struck with headach and nausea. In two days afterwards I was seized with a fever of the same character.'"

"9. Within a few hours after Dr. James Clarke had visited a bad case of typhus, which terminated fatally, he met Dr. Cleghorn in the street, and said, I have got a *fugh** to day, at the hospital, which I cannot get rid of. He dined at Dr. Ferguson's and ate heartily. In the evening, not finding himself quite well, he took six grains of calomel. On the next day he sat down to dinner at his father's, but could eat nothing. His father advised him to go to bed, and take some medicine. This was on Sunday. On Monday Dr. Cleghorn saw him again; when he expressed his extreme sense of weakness by saying that his legs were completely knocked from under him, and his strength entirely gone. On the eleventh day of the fever he died.

"10. Dr. Waring, on visiting a patient labouring under typhus fever, found the room so close that he instantly broke a pane of glass in the window. On his return home, he told Mrs. Waring that he had got a knock on the head which all the college of physicians could not cure. Dr. Cleghorn saw him on the next day, when he repeated to him the same words. He had been engaged in lecturing for Dr. Cleghorn during the preceding days, and had very much overworked himself. The fever thus produced was fatal.

"11. On the 13th of August, 1822, Dr. Parkinson, at the time rather weak and delicate, and affected with a slight bowel complaint, visited a person labouring under a fever, who resided in a small low apartment, wholly destitute of ventilation. While Dr. Parkinson stood close to the bed, the patient suddenly sat up. Having perceived a most disagreeable smell, he observed at the instant that he had caught the infection. He rushed to the window, and forced out a pane of glass. During the next day he made no complaint, but appeared dull and out of spirits, was flushed, and said that he felt very cold. At night he became hot and restless. On the

* "This word in Scotland means a heavy disagreeable smell."

next day (10th) the pain in his head was so severe that he could not leave his bed. On the 16th he was rather better—he had been relieved by medicine—the headach had abated, and he was able to leave his room. On the night of the same day (16) the headach returned with excessive violence; and on the 20th he died.

"12. *From Barker and Cheyne's Report, Vol. I. p.* 472. 'A child, on being discharged from a fever hospital, was admitted into a charitable institution, and brought with her a small bundle of clothes, which had not been disinfected. The bundle was opened by a woman resident in the institution, who perceived an exceedingly disagreeable odour to issue from it. In a few minutes the woman became ill, and her stomach sickened; which proved the beginning of a fever such as was prevalent. Her's was the first case of the epidemic in the institution.' "

Several other cases, together with his own, are detailed by the author; but he does not always mention the length of time between the exposure to the efficient cause, and the full irruption of its effects. From numerous similar instances which have come under our own observation, we believe that the period which elapses between exposure to the miasm of contagious fever and the full explosion of the disease, is of very various duration,—from a few hours to many days. In the majority of cases recorded by Dr. Marsh, a sensation of a noxious impression on the system was immediate, as it usually is, and contemporaneous with exposure to the exciting cause; but the development of the fever seldom was under several hours. In nearly all the cases recorded by the author, the disease supervened within forty-eight hours after the impression of the contagious miasm. We have seen the fever fully formed within twelve hours from exposure; and we have also seen fifteen days elapse before the appearance of rigours. The last case illustrating this latter fact which came before us, was that of a young lady residing a few miles from London. She went to town to see a friend confined with continued fever of a typhoid character:—there was low muttering delirium, great prostration of strength, &c. Upon entering the apartment of her sick friend, and holding forward her head for the purpose of recognition, the odour of the patient's person and bed clothes was offensive to her; she felt slight nausea and sinking at the epigastrium, to which supervened headach, formication, coldness along the spine, &c. and weakness of the limbs, with weight in the loins, general debility, and loss of appetite. These symptoms, with a pale, sickly, and muddy countenance, continued, and on the ninth day increased. She then had leipothymia, attended with chills, and slight rigours, followed by intense pain in the head. Upon the occurrence of these last symptoms, the writer of this was sent for. The stage of reaction was then fully formed. As many leeches as could be applied around the occiput, behind the ears, and upon the temples, were ordered; the hair was cut off; cold applications were constantly employed, and other active measures were recommended. The fever went its course favourably, but did not terminate until the twenty-first day, when an evident crisis supervened. This case of fever was of the same kind with that from which it was propagated, but less severe in its character, probably owing to the former having been more left to nature. Similar instances have occurred to us; but we do not recollect, at present, of any case wherein the full supervention of fever, proceeding only from contagion, was longer than fifteen days from the last impression of its cause: but we have seen every intermediate period elapse, down to ten or twelve hours, and have thought that we could account for the marked difference in the duration of the formative stage of the disease, as the cases presented themselves to our notice, by the circumstances of the patients at the time of exposure, and the concentration of the efficient cause. Although we have said that fifteen days was the longest period which we have seen elapse from the last impression of contagion till rigours supervened, yet we believe that a longer time may pass. We think, however, that in many of the instances which have been seen of the longer duration of the formative stage of contagious fever, the patients have been so circumstanced as to render it very doubtful at what time the actual infection was caught; and even in cases where the exposure to contagion was satisfactorily proved to have been much longer than the time now mentioned before disease appeared, it is doubtful whether or no such exposure had farther influence upon the system than to predispose it to the operation of whatever causes of fever may have acted upon the body for some time afterwards,—the subsequent action having been the efficient cause, without which the previous exposure to contagion might have been unproductive of disease.

The cases adduced by the author in illustration of the latent period of fever, are altogether those of fever proceeding from contagion. Of the phenomena which supervene from exposure to other causes of fever, as to malaria for instance, and the full development of disease, with the different periods which elapse between the operation of the exciting cause and the full production of its effects, he has made but little mention. In cases of fever proceeding from the impression of malaria, cold, &c. the duration of the formative stage is very various, and often very long. Into this subject, however, it is not our intention to enter.

With respect to the *modus operandi* of the contagious miasm, we perfectly agree with the author in stating its immediate impression to be upon the nervous system; but we do not concur with him when he says, that it is the cerebral nerves and brain, or, in other words, the cerebro-spinal system of nerves,

upon which the noxious impression is first made. From every consideration which we can pay the subject, we have been long led to believe, that the morbific cause first acts upon the ganglionic system of nerves,—the most generally connected with the other systems and organs of any tissue of the body. The effect produced by the contagious miasm on the olfactory nerves, which are intimately related to this system; the immediate influence which is produced upon the pulse, the stomach, and through every part of the body; the sense of sinking and distress at the epigastrium, &c. are all proofs that the miasm, during its passage into the lungs, and along the air passages, influences the condition of the ganglial nerves. The circumstance of these nerves being the only ones which are ramified on the blood-vessels, particularly those of the internal organs, serves to explain the early effects produced upon the circulatory organs, and upon the blood itself, by the causes of fever. During the reign of the humoural doctrines the contagious miasm was believed to be received into the blood, and its action upon the system was explained conformably to that view.

From the days of Hoffmann, the more immediate impression of the efficient causes of fever has been generally referred to the nervous system; but as pathologists, until lately, have paid but little attention to the appropriate functions of the different orders of nerves distributed throughout the body, and have reasoned respecting them as if the offices of all were alike, and as if what we know respecting the functions of the cerebro-spinal order of nerves should be also imputed to the ganglial nerves; so the doctrine of Hoffmann and his followers, having reference merely to the conditions and functions of the former, which are inadequate to the explanation of the early, more advanced phenomena of fever, has lately been considered untenable; and the opinions formerly entertained regarding the direct operation of the agents of fever upon the blood itself, have been revived, if indeed it can be said that they were altogether laid aside by many pathologists of this and the previous age. We think that the supporters of both systems have been too exclusive, and that truth would have been sooner found if she had been sought after, at the same time, by more routes than one. The functions of the ganglial order of nerves having been viewed as identical with those of the cerebro-spinal order, and the manifestations resulting from impressions made upon the latter being so generally confounded with those induced upon the former, together with the impossibility of explaining the immediate and consequent effects of the efficient causes of fever, conformably with what we know of the relations, connexions, and offices of the cerebro-spinal order of nerves, have all combined to render the opinions of Hoffmann and his followers of difficult tenure; whilst the more visible effects produced upon the sanguiferous system have given the humoural doctrine a certain degree of credit, and have led many to view the changes induced in this system as earlier in the procession of morbid phenomena than they actually are, and as of greater importance than they seem to us to be. In a word, had investigators of this point of pathology considered the minute organization of the ganglionic nerves; their difference, in organization and distribution, from those subjected to volition; their intimate relation to the sanguiferous system; the circumstance of the heart and blood-vessels being supplied only with these nerves; the fact that the internal viscera receive, comparatively speaking, but few nerves beside them; the manner in which they combine in one circle the various functions upon which life depends, whilst they seem dominant of the various actions which individual organs perform,—they would have perceived, that it could be only upon this system, and through the avenue of the organs upon which these nerves are ramified, or to which they are intimately related, that the causes of fever can make their first impression; whilst they would perceive also, that the very intimate connexion existing between the ganglionic nerves, the heart, and the arteries, upon which they are copiously ramified, must necessarily occasion the extension of morbid impressions from the one to the other; and that the efficient causes of fever, making their immediate invasion upon the system of ganglionic nerves, would so change the conditions of this system, as to influence the circulating organs, and even the state of the whole circulating and secreted fluids of the body. Thus it will be seen, that while we conceive the nervous system to be the part immediately acted upon by the agents of fever, we consider that this action is chiefly exerted upon the nerves of organic life—the ganglial nerves;—that owing to these nerves being principally distributed to the sanguiferous system and internal viscera, this system and these viscera are influenced through them; and that the blood itself and all the secretions become changed in consequence of the morbid impression first made on the nerves upon which the circulation and the secretions depend. Thus, while we view the nervous system as the one immediately affected, we consider the circulating and secreting organs as those subsequently deranged; and that the disorder of the one generally tends to perpetuate that of the other. Hence it will appear, that the nervous pathology is true to a great extent, whilst the humoural doctrine is also true in part; particularly as far as concerns these secondary effects which usually supervene during the progress of fever.

With regard to the second head into which the author proposed to divide his subject, namely "*the symptoms which manifest themselves during the latent period of fever,*" we cannot find that he has entered upon it with that fulness and precision which we expected, and which the subject requires. To be

sure, the expression, if not altogether an Hibernicism, could scarcely, at least, have warranted our expectation; for we cannot justly consider that which is latent to be manifested by symptoms. The truth is, that the "latent period of fever" is altogether a misnomer, for this stage of the disease is by no means latent to the attentive observer. At any rate, the name imposed by our author is certainly not happy; and we would therefore presume to recommend some other. Hildenbrand, who has treated of this stage of fevers more copiously and correctly than any other writer with whom we are acquainted, and given a very accurate view of the symptoms following exposure to the exciting cause, has divided the whole progress of fever into seven periods, or stages. He states the first, or *premonitory* stage, to embrace the period which elapses between the first impression of the exciting cause, and the supervention of chills, rigours, or horripilation; and has given a lucid exposition of the symptoms and progress of this stage, which he says is always evident to both patient and practitioner, if at all attended to. The time which elapses from the supervention of chills or rigours, to the commencement of reaction, he terms the stage of invasion. But we cannot follow this most experienced writer through the other stages into which he divides the disease.

Dr. Copland, in a most comprehensive course of lectures on the practice of medicine, given in 1825 and 1826, fully investigated the early stages of fever, and divided the disease into six distinct periods.

The *first* period he denominates "precursory," which is the same with the "*stadium oportunitatis*," of Hildenbrand, and the "latent period" of Dr. Marsh. The *second* he calls the period of "invasion," or the "formative" stage of the disease, being the period whence the duration of the malady is reckoned, and the critical days in contagious fevers are calculated. The *third* period he names that of "excitement," or reaction, which he views as consisting, 1st, of an incremental excitement, and, 2d, of stationary excitement. The *fourth* is the period of "crisis." The *fifth* the stage of "decrement, decline, or exhaustion;" and the *sixth* the period of "convalescence," which, Dr. Copland thinks, ought to be always treated as a stage of the disease, for various pathological reasons, as well as on account of the future health of the patient. As far as we can recollect, this physician, who has viewed the phenomena of fevers generally with great precision and closeness, considers that the efficient or exciting causes of fever make their immediate impression upon the nervous system of organic life; and that, owing to the connexions and relations of this part of the nervous system, the circulating and secreting organs are deranged early in the disease, and the whole organization and circulation become, to a greater or less extent, involved in disorder, more particularly in those fevers which originate in, or are propagated by contagion.

The concluding part of Dr. Marsh's paper is upon the treatment of the "latent period of fever;" but here we find nothing further than what is to be learned from the best writers on febrile diseases.

From the London Medical and Physical Journal.

PULMONARY ABSCESS.

Cases of Peripneumonic Abscess of the Lungs; with some Remarks. By W. F. Chambers, M. D. Physician to St. George's Hospital.

We are indebted to the pathologists of the present age for our knowledge of the fact that suppuration of the lungs, consequent on simple inflammation, is a disease of exceedingly rare occurrence. Dr. Duncan, sen. in his Treatise on Consumption, published in 1813, makes apostema of the lungs one of the species of phthisis pulmonalis; and, although he states that it is a less frequent modification of the disease than that which arises from bronchial inflammation or tuberculous concretion, he does not seem to have been fully impressed with its very great comparative rarity; nor, indeed, am I aware that any writer before Laennec has placed this matter in a just point of view.

The truth is that what has long been known with reference to another organ, the liver, is almost equally applicable to the lungs. I mean that, as in the liver, it is infinitely more common, in this country at least, to find that inflammatory action has proceeded just so far as to cause the deposit of adhesive or indurating matter in its substance, than that it has been intense enough to induce suppuration; so in the lungs, when inflammation takes place, in a large majority of cases, it stops short of suppuration, producing, for the most part, induration or hepatisation of the affected portion of the viscus. Hence, then, it is easy to account for the comparative rarity of apostematous phthisis. For, as it will be allowed that tuberculation of the lungs is a much more frequent affection than their simple phlegmonous inflammation, and as we have seen also that, even when the latter occurs, it is very seldom of such intensity as to destroy the affected part by suppuration, whilst the former almost invariably leads to the formation of vomica; it follows, of course, that phthisis consequent on peripneumonic suppuration must be a much less frequent disease than that which arises from the maturation of tubercles in the lungs.

I may be allowed to say here, also, that, during the time I have been attached to St. George's Hospital (a term of nearly fifteen years,) my own experience justifies this conclusion. Within the above mentioned period, the number of deaths from pulmonary disease has amounted to above 600. The bodies of all these persons, with a very few exceptions, have been carefully examined after death, and amongst them, according to the best of my recollection, there have been found only three cases of pure phlegmonous abscess in

the lungs.* During this period also, many individuals, with diseases of the lungs, have left the hospital, after receiving various degrees of relief. Amongst these, three or four instances of pulmonary apostema have perfectly recovered.

We may say then, that, out of many hundred cases of pulmonary disease, only six or seven have occurred of true phlegmonous abscess; of which it may be remarked, that at least one-half have terminated favourably.

Having premised these observations, I will now relate two cases of the disease in question, taken from the journals of the hospital. The first of these, it will be seen, terminated in recovery. The second died in the house, and afforded us an opportunity of examining the diseased organ; the appearances of which verified the opinion which the previous symptoms had suggested respecting the true nature of the malady, and rendered it probable that we were right also with regard to the complaint of the first-mentioned individual who recovered, inasmuch as the features of the disease were the same in both.

Case I.—Francis Brennin, aged thirty-four, labourer, of St. James's parish, admitted January 5th, 1825, of a muddy, sallow complexion, and much emaciated. He complains of difficulty of breathing, with heavy pain in the upper part of the left side of the thorax, which is less expansible than the right; he has a very troublesome cough, with a copious expectoration of a brownish yellow colour and *most offensive smell*, tinged with dark-coloured blood; *his breath also has a putrid smell*, which can be perceived at some distance. He cannot lie on either side, on account of his cough; and he complains besides of a dull pain in his head. He has no regular hectic, but has occasional shiverings, with flushings, followed by perspiration. Pulse 130, small; skin cool; tongue of a livid colour, with a smooth, clean, moist, surface; bowels open; urine high coloured; appetite indifferent.

He says that some months ago he received a blow on his left side, ever since which he has suffered more or less aching in the part, but that within the last month he has been attacked with severe pain there, accompanied by fever, cough, and headach, and subsequently with expectoration. He states that he has been treated with cupping and blisters, which have considerably diminished the severity of the pain.

He was now ordered to be placed on milk-diet, and to take the following medicines:—Haust. Salin. cum Mucilag. Acaciæ ℥j.; Tinct. Digital. m. v.; Vin. Ipecac. m. xv. sextâ quâque horâ.—Extr. Colocynth. comp., Extr. Lactucæ sativæ, āā gr. v. omni nocte.

Under this treatment he daily improved until the 21st. The report on that day is as follows:—Cough diminished; expectoration less in quantity, but still fetid; less pain in the side; pulse natural; skin cool; bowels regular. He still sweats occasionally at night.

Mist. Ferri comp. ℥j.; Mist. Camphoræ ℥ ss. ter die.—Repr. pilulæ.—(Meat daily, with a pint of porter.)

This treatment was continued with little variation until the 14th of March. He had then gained flesh, he coughed very little; his expectoration was of a lighter colour, had scarcely any smell, and was much diminished in quantity. His pulse, tongue, skin, bowels and urine, were in a natural state; but still the left side of the thorax was not perfectly expanded by inspiration. He was now directed to attend as an out-patient until the autumn, when I discharged him, perfectly restored to health. It was remarkable that the left lung at last entirely regained its expansibility.

I will reserve the few remarks which are suggested by the history of this case until I have related another instance of the same disease which terminated unfavourably, and afforded us an opportunity of examining its seat after death.

John Hayward, aged forty-five, labourer, of St. James's parish, admitted October 4th, 1826, of a sallow complexion, much emaciated and very weak. He complains of difficulty of breathing, cough and expectoration of considerable quantities of foul, *highly offensive*, purulent matter, of a dark yellow colour, tinged in part with blood. *His breath is very fetid;* he has pain in his chest on both sides, which is aggravated by any attempt to make a deep inspiration. He lies generally on his back. Pulse 110, small, but somewhat sharp; skin hot; tongue red at the edges, furred in the middle; bowels open; urine high-coloured; appetite indifferent.

He says he was attacked eleven weeks ago with symptoms which he describes as those of peripneumony, but was not bled for them. These subsided in a fortnight, and were followed by the expectoration above described, and the other present symptoms.

He was placed on fever diet, and ordered to lose eight ounces of blood from the arm,

---

* In this number, I do not include those appearances of circumscribed abscess discovered by dissection in persons who have died after severe injury of the head, or any other great disturbance of the nervous system, which sometimes occur not only in the lungs, but in the liver, in the spleen, and, in fact, in almost all glandular and cellular parts of the body. These are to be placed in the same class as the collections of albuminous matter in the serous cavities, which are frequently found after death, under the circumstances just mentioned. All of these, in spite of their similarity to the results of inflammation, owe their origin to a process essentially distinct from common phlegmonous action. They are in some way the consequence of the total disorder subsisting in the nervous and secretory systems, and, when they appear in this manner in the lungs, must not be confounded either with the effects of ordinary peripneumony or of tuberculation.

and to take the following medicines:—Haust. Salin. cum Liq. Antim. Tartar. m. xvj. sextâ quâque horâ.—Magnes. Sulphat. ℥ ss. cràs.

October 5th.—Blood cupped and buffy. Pain relieved; pulse eighty, soft; skin cooler; tongue clean; cough less frequent; bowels open.

Repetantur medicamenta.

He remained nearly in this state until the 8th, when a bowel-complaint occurred. This was allayed by small doses of Dover's power; but, on the night of the 14th, his strength seemed to fail him altogether. He was ordered now to take from time to time small quantities of wine or brandy, mixed with warm water. He did not, however, rally, but died on the following day.

The body was examined on the 16th, and presented the following appearances of disease.

The lower lobe of the left lung was somewhat indurated towards the posterior part. In the right side, there were a few ounces of opaque serum in the pleura. The apex of this lung was enveloped in thickened pleura. which adhered closely at that part to the contiguous pleura costalis. On cutting into the lung, two cavities, each about he size of a small orange, were brought into view; one in the superior part of the upper lobe, the other in the centre of the middle lobe. The first was lined with a loose sloughy substance, and filled with dark yellow fetid matter; the second was empty, from the pus and sloughy matter having been expectorated through the bronchial tubes, which were seen communicating with it, and was lined with a very thin membrane of a dark colour. The rest of the lung was somewhat compressed by the fluid in the pleura, and particularly at the lower part; whilst, in the neighbourhood of the abscesses, it was slightly indurated, or hepatised; but there was no appearance of tuberculation in either lung.

There were no appearances of disease in the abdomen, except an inconsiderable enlargement of a few of the mesenteric glands.

These two cases are, I think, fair specimens of the disease of which we are speaking, and show that its symptoms are pretty clearly distinguishable from those which characterize ordinary tuberculous consumption.

If, indeed, we can ascertain with accuracy the early symptoms of the disease, we shall have little difficulty in fixing on its true nature. This, however, is not always in our power, either from want of observation and intelligence in the patient himself, (especially when he happens to be of the uneducated class of the community,) or else from the insidiousness of true pulmonary consumption, whose earliest approaches are often overlooked, and its commencement dated from some accidental inflammatory attack in the lungs or pleura, which may be in fact altogether a secondary affection.

In this difficulty with respect to the history of the complaint, the symptoms, as observed in the two cases just described, will be generally decisive of its real character.

In the first place, the appearance and the smell of the expectoration are totally different from those which belong to the sputa of tuberculous consumption.

In apostema of the lungs, the expectoration is of a brownish or greenish yellow colour, and has an intense odour of putrefaction. This colour was correctly compared, in my hearing, by a physician of considerable experience, particularly in diseases of the lungs, to that of "rotten eggs;" an appearance in the expectoration which, he said, he had long been accustomed to consider, when joined with fetor, as holding out a more favourable prospect of recovery to the patient than that of ordinary purulent matter. This appearance is obviously owing to the mixture of pus and blood with the particles of sloughy lung, which form the parietes of such abscesses: to the latter also is, of course, to be attributed the offensive odour of the sputa. It is not to be wondered at, under such circumstances, that the breath of the individual should be of an almost intolerable smell.

It may be remarked here, that, in cases which terminate favourably, the dark colour of the expectoration disappears, and its fetor decreases gradually, as the sloughy parietes of the cavity are, from time to time, ejected by coughing.

It is scarcely necessary to point out at length the difference between this kind of expectoration and the white or yellowish inodorous sputa, occasionally streaked with more or less scarlet blood, which characterize tuberculous phthisis. I have said that the latter are generally inodorous: if they be otherwise at any time, it may be considered an accidental occurrence, arising from the confinement of the matter for an unusually long period in a vomica, and they even then retain their ordinary appearance; and are very unlike, in this respect, to the expectoration I have endeavoured to describe as belonging to peripneumonic abscess.

The next distinctive mark of this disease which I will mention is, if I may so speak, a negative one: it is the absence of regular hectic fever, after the abscess is fairly opened into the air-tubes.

In the first of the cases related above, the shiverings, flushings, and perspirations were slight in themselves, and took place only occasionally; whilst, in the second, there was no hectic sweating at all.

Besides this, we may remark that the clear complexion and bright colour, which so often attend tuberculous affection, is absent in cases of apostema of the lungs, in which the complexion is characterized, for the most part, by a dull muddy sallowness.

I am well aware here, also, that there are instances even of true tuberculous consumption in which the complexion is thick and bloated, or in which hectic fever is not observable. In truth, every practitioner must have now and then seen tuberculous con-

sumption proceeding to a fatal termination, without any elevation of the pulse above its natural standard of frequency, or any evident increase of the temperature of the skin. These, however, are exceptions to the general rule, and, when they present themselves to us in practice, are less fertile sources of perplexity than they may at first sight appear to be; inasmuch as our diagnosis is to be at all times founded, not on single symptoms, but on a full and careful observation of all the circumstances of the disease.

We may say, then, that where the expectoration is such as we have described above,—where the breath has a highly putrid odour,—where the hectic fever is indistinct and irregular,—where the complexion is of a sallow or leaden hue,—and where, besides, the history of the case is that of simple inflammation from the commencement; or even where some of these diagnostic marks are deficient or indistinct, whilst the majority of them are clearly present, we may decide, with as much certainty as the general imperfection of our science will allow of in any case, that the disease is apostema of the lungs, and not tuberculous consumption.

Nor, indeed, is our diagnosis to be here considered a matter of mere speculative curiosity; as it is intimately connected with that which is of paramount interest to the patient and to his friends: I mean the prognosis afforded by the disease. For, if the quantity of matter expectorated in such cases as those described above were presumed to be the produce of tuberculous vomica, it is almost unnecessary to say that the prospects of the individual would be unfavourable indeed: whilst, on the contrary, if we have reason to think that the sputa arise from simple suppuration of a part of the viscus, we may look forward with much more sanguineness to the termination of the malady, as undoubtedly a large proportion of such cases arrive, under proper treatment, at a favourable conclusion.

With regard to the treatment of this disease, it will be seen, by a reference to the cases I have related, that the separation of the sphacelated part of the lung, of which the parietes of the abscess or abscesses are formed, is often accompanied, even in an advanced period of the complaint, with attacks of inflammatory action, requiring venesection and the other expedients applicable to the treatment of inflammation; the necessity for which will be sufficiently pointed out by the state of the pulse and the skin, and the aggravation of pain in the seat of the disease. As soon, however, as this stage of the disease has passed by, the patient will be observed to thrive and fatten under the administration of chalybeates and other tonics, and the use of a more nutritious diet than was previously admissible; means which may be resorted to even when the cough is troublesome and the expectoration still purulent and bloody, with much more boldness than would be justifiable under similar circumstances in cases of tuberculous affection of the lungs.

The mode in which the lungs recover themselves, and become capable of again performing their ordinary functions, without any particular inconvenience or difficulty, after they have suffered from simple suppuration, may also be fairly deduced from the cases which I have described. It will be observed in the first of these cases, that during the earlier part of its progress, and even after the disease had taken a favourable turn, the left lung, in which the abscess occurred, was less expansible than the right, in which it may be presumed there was no disease; so that, when the patient drew in his breath deeply, the right side was much more elevated by the inspiration than the left; but that, as the fetid matter was from time to time ejected, and the diseased lung freed from the suppurated and sloughy parts, it gradually recovered its expansibility, and at length appeared to admit air as freely as the other lung.

Now the manner in which this was effected is shown by the dissection of the case which died. In it one of the cavities still contained sloughy and purulent matter; but the other, the inferior one, had been cleared out, and was found lined with a smooth membrane, very similar to, although of a darker colour than, the ordinary mucous lining of the air-tubes, and the cavity had evidently, during the latter part of the patient's life, served the purpose of a large air-cell.

In the same manner we may presume that the *whole* of the excavation in the case of Brennin (who recovered) was emptied of its contents, and rendered capable of admitting air, and thus at length allowing the lung to be expanded as usual during inspiration.*

We must recollect besides, that as, during the inflammation and suppuration of a portion of the lung, some of the neighbouring pulmonary tissue, although not absolutely involved in the suppurative process, may become indurated by the deposition of coagulable lymph; so if, after a time, the lymph thus deposited is removed by the absorbents, which I believe to be possible when the hepatisation is not extensive, this impediment also to the free dilatation of the chest will be removed.

If it be asked why the former of these cases recovered, whilst the other terminated in death, it may be suggested, in the first place, that the individual who died had been suffering much longer from the disease than the patient who recovered; that the former had not been medically treated at all, whilst the latter had been cupped and blistered before his admission; that, in the case which terminated favourably, the disease was obviously confined to a small portion of the left lung, whilst, in the other instance, both lungs had been more

---

* A curative process, somewhat similar to this, is occasionally instituted in tuberculous excavations of the lungs; a distinct instance of which we have lately seen in the dissecting room of St. George's Hospital.

or less inflamed; and that, besides, the peripneumony which had partially destroyed the substance of the right lung, the patient had suffered from pleurisy, as evinced by the empyematous effusion in the right cavity of the thorax.

Before I conclude, I will take the opportunity of saying a very few words on the subject of common tubercles of the lungs. In the above remarks, I have often mentioned tuberculous vomica as an ordinary and well-known form of degeneration in the pulmonary tissue. Now the question respecting the true pathology of this variety of tubercle, has given rise to many ingenious attempts towards its elucidation. I trust, however, I shall not be considered presumptuous in saying that no one of the explanations hitherto offered, as far as I am acquainted with them, appears to me to be conclusive on the subject. My own impression, indeed, founded on repeated examinations of these bodies, and a careful consideration of all their varieties and modifications, has long been, that the original nuclei of pulmonary tubercles are formed in the mucous glands or follicles of the membrane lining the extreme air-cells and air-tubes; which species of glands I believe, with Bichat, to abound wherever there is mucous membrane, although they are in many places not discoverable until they are demonstrated by disease; these glands or follicles being choked up with their own coagulated secretion, and, where several of them are similarly gorged and enlarged, often coalescing with each other, become, as I conceive, the sources of irritation and subsequent ulceration of the surrounding tissue. At length this mass of coagulated and vitiated mucus, mixed with the pus of the ulcerative process, is thrown up by coughing, and leaves those cavities in the lungs, lined with a thick, whitish, coriaceous membrane, so well known as tuberculous vomicæ.

I am well aware that there are some obvious difficulties in this explanation of the disease in question; but I am prepared to show, and may perhaps take an opportunity of doing so in a future Number of your Journal, that no view hitherto taken of the origin, and progress of these concretions is open to fewer tenable objections than this, or accounts more consistently with the pathology of mucous membranes in general (all of which are subject to a similar disease,) for the phenomena which are observed to accompany the maturation, as it is called, of tubercles in the lungs.

From the Lancet.

DISEASES OF THE NAILS.

Hospital of Surgery, St. James's.

It is too frequently the fault of the surgical student, in attending hospital practice, to allow his mind to be captivated, and exclusively interested by the imposing magnitude of "capital" operations, and of rare and extraordinary cases, while he heedlessly passes over the more common and less dangerous diseases, considering them to be of little comparative consequence, but which are the very ones that require most knowledge and experience in conducting their treatment, and which he will, in private life, have so frequently to encounter.

The affections of the nails, although of a most painful and harassing nature, and which frequently lead to distressing and serious results, have been too frequently considered as holding a very humble rank in the catalogue of disease. Having, however, of late witnessed the progress of several cases of this kind, and having seen the misery which these affections caused, and the almost savage practices generally employed in their cure, we have been convinced of the propriety of viewing them in a far different light. It is, therefore, with much pleasure we have to report the history of some cases from this hospital, and to give an account of a most simple, gentle, and scientific plan of extracting the nail, which we had an opportunity of seeing practised by Mr. Durlachre, the celebrated Royal Chiropodist, who was introduced by Mr. Wardrop for the purpose of exhibiting his plan, which we consider a most important improvement in this department of operative surgery.

Most of our readers are probably aware, that Mr. Wardrop, in a paper published in the Medico-Chirurgical Transactions many years ago, was the first to point out the difference between what is generally called, "the growth of the nail into the flesh," and that affection of the secreting surface, or matrix, which he has distinctly described under the name of "Onychia Maligna." He has likewise shown, in the same paper, the impropriety of the term "growth of the nail into the flesh," since in general the form of the nail is not changed from the natural state, but the neighbouring soft parts being irritated by the pressure of the shoe and weight of the body on its sharp edge, swell and envelope it, and in this way it becomes only the secondary cause of the continuance of the disease. These observations led Mr. Wardrop to treat the affection, not by attempting to alter the form of the nail, but by allowing it to grow completely beyond the soft parts, and, at the same time, subduing the inflammation and thickening of these by the use of escharotics. In the majority of cases, this practice is attended with complete relief; but there are some in which the disease in the neighbouring integuments is so extensive, and where the nail has been partially and incompletely removed, in which the best practice is to remove a portion from its matrix, the effect of which is to allow the soft parts to regain their healthy condition, while the regeneration of the nail is taking place. During its growth, the new nail can, if necessary, be controlled in its form and direction.

To accomplish the removal of the nail, various operations have at different times been performed, all of which being remarkable for

their severity, render the method of Mr. Durlachre more particularly worthy of being made known. Ambrose Parè recommended the sharp pointed blade of a pair of scissors to be thrust up the length of the matrix between the flesh and the nail, and after dividing the latter, he tore out with a pair of forceps, its two portions separately. The plan lately recommended by Baron Dupuytren, is nearly as barbarous; he with a bistoury cuts completely out, not only the nail itself, but also its matrix; an operation which entirely precludes the possibility of the recurrence of the complaint, but at the same time for ever deprives the patient of the use of the nail.

The operation of Mr. Durlachre, by which any portion of the nail may be extracted, is performed without giving almost the slightest pain, and without spilling a single drop of blood. The principle of its performance is founded on the anatomical fact, that the nail is enclosed within a doubling of the epidermis, and it consists in cutting the former through, without injuring that portion of the cuticle which is reflected over the singularly sensible surface which lies below. The manner in which he effects this, is described in the operations which he performed in the following cases:—

Case 1. ——— about 20 years of age, has been long affected with a severe inflammation of the soft parts of the last phalanx of his great toes, which he ascribes to the "growth of the nails into the flesh," from the wearing of tight shoes. The teguments are red, swollen, and so very painful as to prevent him from walking or putting on shoes; his life is thus rendered miserable; the skin at the edge of the nail is ulcerated; a fungous growth has arisen, which bleeds on the least exciting cause. The pain, which is occasionally accompanied with general febrile derangement, is frequently of a very severe character. He has undergone several most painful operations on the nail, and tried every variety of treatment without receiving any permanent benefit.

In this very aggravated case, where the disease affected not only both toes, but also each side of them, the operation was of a more complicated nature than what, in ordinary cases, is required, as it was necessary to cut away both the edges of each nail; this Mr. Durlachre effected in the following way:—having cleaned the root of the nail, and marked the distances, with a very small fine knife, which resembled in form Key's cataract needle, he made very gentle, repeated, and cautious incisions, till he had cut through the nail, and arrived at the epidermis reflected below it, occasionally using a small lever to show how far he had penetrated. He then, with a small pair of forceps, which had a rounded point and was provided with a sliding clasp, very gently loosened the portion of nail from its attachments, and extracted it. This operation was successively performed on each side of the nails, and was attended with no pain, and without spilling a single drop of blood. The patient experienced immediate relief, and even before he left the room a diminution in the inflammatory redness of the soft parts was apparent, and he was able to walk with comparative ease.

Case 2. J. G. æt. 30, for seven months had been under the care of different surgeons, for a "growth of the nail into the flesh" of the right great toe, which was attended with so much swelling of the soft parts as completely to surround and bury the nail, and with so much inflammation and pain as to prevent him entirely from walking. He was, in this way, completely prevented from following the avocations of business. During the continuance of the complaint, he had undergone many exceedingly painful operations, in which portions of the nail had been cut and torn out; he had, however, obtained no permanent relief.

Mr. Durlachre, after examining this case, stated, that although the anterior part of the nail had been most assiduously taken away, yet that a shoulder had been formed running transversely into the soft parts, which had gradually increased in length after the different operations; he therefore proposed to extract a portion of the nail in its whole length, which would carry along with it the shoulder, which he conceived was the cause of all the disease. The method which he pursued to accomplish this object was in every respect similar to the operation detailed above. The patient instantly felt relief; the inflammation of the soft parts soon subsided, and when the nail was reproduced a perfect cure had been effected.

From the Medico-Chirurgical Review.

CLINICAL REPORT ON THE SEAT OF FEVER, BY M. BALLY.

[*Cochin and La Pitié.*]

The last quarter of 1826 furnishes the materials for this report, which is entirely dedicated to the paramount subject of investigation on the Continent—GASTRO-ENTERITIS. We too, deem it a subject of high interest; and are glad to see that it excites peculiar attention in this country, especially among hospital physicians.

It is, says our author, by connecting morbid phenomena with the local lesions on which they depend or are connected, that the moderns have arrived at exact knowledge of those grave and complex affections to which the ancients have applied the vague term of putrid, malignant, nervous, and adynamic fevers, which are, in reality, veritable *gastro-enterites* degenerated, or as they are more properly and precisely termed by M. Bally, *ileo-diclidites*, signifying *inflammation of the ileum and upper surface of the valve of the colon*, the parts most commonly affected in fevers. M. Bally concludes, from a passage in Hippocrates, that the Father of Medicine was acquainted with this remarkable fact. He observes in the third book of his Epidemics, that, "among those individuals

who perished, whether the disease ran a quick or a protracted course, the greater number died of affections of the bowels." This affection, M. Bally thinks, could be nothing else than inflammation. In examining the cases of fever detailed by various authors, and by Pinel among the rest, he considers it impossible not to conclude that the majority laboured under that state of the intestinal canal so well described by Broussais and his disciples. Those who have taken the pains to open many bodies after death by fever, afford innumerable proofs of the phenomenon in question, though they looked upon the disease as a concomitant or consequence rather than a cause of fever. In short, says he, if we compare the descriptions of putrid and malignant fevers, as handed down to us, with those of the gastro-enterites of the present day, we cannot but be struck with the resemblance. All allow that inflammation of the mucous membranes is a very common *attendant* on fever—and for his own part, M. Bally believes it to be the disease itself—or, at least, the first and principal lesion in fever.

The fevers of the last quarter of 1826 have tended to confirm M. Bally in the truth of this doctrine; and what is more, they have enabled him to make some distinctions not hitherto much noticed, and to adopt an important and successful method of treatment.

Scarcely had intermittents begun to subside, when inflammations of the digestive tube became prevalent. Some of them were hæmorrhagic, and terminated fatally in a very prompt manner. The greater number, however, assumed a low or typhoid type. These forms were more dangerous in proportion as they succeeded early to the intermittent epidemic; and M. Bally conceived that there was an intimate connexion between the two epidemics, especially as the gastro-enterites frequently assumed a quotidian intermittent character. When this was the case, the antiphlogistic treatment did not succeed, and the sulphate of quinine was effectual. The state of adynamia, which often supervened in the course, or towards the close of the fever, did not appear to result from any primitive debility of the subject, or as consecutive of gastro-enteritis; but it seemed often to depend on the lesion of some other organ, over which the antiphlogistic treatment had not effectual control. The rigidity of the limbs, the tremors, the subsultus tendinum, the throwing back of the head, the delirium, the ramblings, the loquacity, the difficulty of expanding the chest—all these functional disorders, says our author, were far from constituting the debility. They showed themselves during the existence of the most acute irritation, and they subsided with it under a very active system of depletion. They must, therefore, have depended on disorder of some particular organ.

M. Fodera considered the superior portion of the spinal marrow as the principal seat of affections truly adynamic; and our author partakes of the same opinion. He thinks this is confirmed both by experiments and by pathological anatomy. The above portion of spinal marrow has been often found softened in the dead body by our author, M. Bally. Stoll, whose authority is good on all points of practical observation, long ago remarked that putrid fevers did not always infer fevers of debility. He was somewhat astonished to find that bleeding and other evacuations cured the disease better than tonics. The oppression and the prostration of muscular power, although different in their nature, acknowledge the same cause. "The first results from congestion; the second, from inflammation of the spinal marrow." Bleeding, he observes, is more effectual in relieving the former than the latter condition of parts. "Thus, in the beginning of all adynamic fevers, the symptoms which constitute debility are owing to congestion or inflammation of the spinal marrow, either primitive or consecutive of gastro-enteritis." We agree with our author that great errors are daily committed by pathologists in considering that there can be no *disorder* in a part during life, if no trace of change of structure be discernible after death. The organization of the brain, nerves, and their investing membranes, is so very delicate, that disorder of function sufficient to destroy life every day occurs, without alteration of structure. Hence the necessity of taking into consideration the symptoms, as well as the *post mortem* investigations.

Numerous dissections, made with the greatest care, have convinced M. Bally that inflammation of the lower portion of the small intestine, and upper surface of the ileo-cæcal valve, constitutes the first period of what are termed putrid or typhous fevers. If this inflammation be checked by nature or art, the subsequent symptoms of debility or putrescency do not occur. If not, the disease proceeds to ulceration or destruction of the mucous membrane. It is very rare to find any alteration of structure in the duodenum, jejunum, or colon. The cæcum itself is seldom affected, although the upper surface of the valve is so generally implicated in the disease. What can be the cause of this locality of the disease in the part above mentioned? M. Bally attributes it to the difference of acrimony in the contents of the small and of the large intestines. Nature, he says, is sometimes equal to the task of curing these ileo-cæcal inflammations—and, in one instance, this was effected by a profuse nasal hæmorrhage.

The division of the disease into two stages or periods, is not only philosophic, but of great importance in a therapeutic point of view. In the first period, or that of inflammation, the antiphlogistic treatment may arrest the progress of the disease, and prevent the degeneration of the fever in the putrid or ulcerative form. But this disease, though so formidable and fatal in its advanced stages, does yet commence in so insidious a manner, that the patient is not soon enough alarmed,

and is seldom sent to an hospital till after the first or second week, when the local affection has made great head, and when the constitutional symptoms veil those of the primary topical affection. As soon as the symptoms indicate that the inflammation is passing into the state of ulceration, it is necessary to abandon the antiphlogistic treatment, as far as sanguineous depletion is concerned, and to have recourse to powerful counter-irritation, so as to attract to the surface that morbid excitement which is going on internally. M. Bally does not, however, employ blisters for the purpose of counter-irritation. He has not seen advantage arise from their application in ileo-diclidites—but, on the contrary, disadvantage, from the property which the lytta has of causing irritation in the internal tissues. Mustard cataplasms have produced much better effects in the way of revulsion, when the brain or other organ was sympathetically affected. But he seems to place his principal dependence on a plentiful crop of pustules, brought out by tartar-emetic in the umbilical region. He has never seen any reason to conclude that the antimony is absorbed on these occasions—a position which we ourselves can substantiate by wide experience of this powerful counter-irritant. M. Bally employs a tartar-emetic plaster rather than ointment, to the abdomen, and in this respect we also coincide with him. It is far less troublesome, and far more powerful than the unctuous frictions. He sometimes applies a dozen of leeches to the part, and as soon as these animals fall off, he places a Burgundy-pitch plaster, well powdered with tartrate of antimony, over the leech-bites. In less than 48 or 64 hours a plentiful crop of pustules is elicited, each pustule surrounded by an areola of inflammation. If any species of counter-irritation can relieve the internal malady, this will do the business. In very grave cases, M. Bally employs an antimoniated drink for several days in succession, with the view of copiously evacuating the acrimonious contents of the small intestines, which prove a powerful source of internal irritation.

"Finally," says he, "when quotidian exacerbations, analogous to the periodical accessions of an intermittent fever, become associated with the ileo-cæcal affection, the sulphate of quinine is to be exhibited, notwithstanding the redness of the tongue, the abdominal pains, the diarrhœa, and the various other signs of inflammation of the mucous membrane of the intestines."

Such was the practice pursued by M. Bally, and, in general, it was productive of the best effects. We shall now give the particulars of a few cases in illustration.

Case 1. Peter Fontier, aged 23 years, had been exposed to wet and cold while in a state of perspiration. On the following day he experienced chills, fever, nausea, pains in the bowels, and diarrhœa. He entered the Hospital Cochin on the 2nd of November, the 21st day of the complaint. The following were the prominent phenomena:—decubitus dorsalis, stupor, flushed face and injected conjunctivæ, tongue dry and red at the sides, epigastrium painful on the least pressure, much diarrhœa, subsultus tendinum. *Prescribed lemonade with gum arabic.* 22d day. He this day had an abundant discharge of black blood from his nose, amounting to 12 ounces. The head is now more free, the abdomen more supple and less painful, the pulse softer. 23d day. Another epistaxis, though less abundant. The tongue is very red, the alvine evacuations copious, frequent cough, increase of subsultus tendinum. 24th and 25th days. Nasal hæmorrhages each day, which do not appear to afford relief. The decubitus dorsalis is now complete, with occasional delirium. The lips and tongue are covered with black sordes—the abdomen is tense and distended, and he has ten or twelve motions daily. *Sinapisms to the abdomen.* 26th day. Another nasal hæmorrhage, and the tongue is less red at the sides, the purging more moderate. 27th day. Epistaxis moderate—great debility—coma. *Lavements of decoctum cinchonæ—sinapisms renewed.* 28th day. The epistaxis did not take place—abdomen not painful—tongue begins to clean. From this time, the disease decreased daily and convalescence gradually ensued, with ultimate recovery.

Case 2. Bougerie, aged 25 years, had experienced, for several days, a bloody diarrhœa, with colicky pains, tenesmus, and pains in his head. He was bled largely from the arm, and 14 leeches had been applied to the anus, with evident relief. He entered La Pitie on the 18th October, the eighth day of his illness. He had then great prostration of strength, with disposition to delirium—flushed face—injected conjunctiva—dilated pupils—dry tongue, red at the sides—urgent thirst—abdomen supple, but swelled and painful on pressure—diarrhœa, with some blood in the stools—pulse hard and frequent. *Rice water with gum.* 9th day. Delirium—intense heat of skin. *Thirty leeches to the anus.* 10th day. Slight epistaxis—dorsal supination—cheeks red—cephalalgia with delirium and subsultus tendinum—lips, teeth, and gums, fuliginous—tongue the same as before. Pressure on the umbilical region gave pain, as also in the right iliac region. The intestinal evacuations are suspended—dysury—pulse strong. *Sixty leeches to the abdomen, followed immediately by a large mustard cataplasm.* 11th day. The same prostration of strength; but the head is more free, the urine more copious, the tongue less red, and the abdomen less tender—pulse softer and slower. 12th and 13th days. Considerable improvement—tongue yellow—several loose stools—skin natural. 14th day. Several hours of tranquil sleep—some return of appetite. From this time the tongue began to clean, and convalescence was soon established.

Case 3. Julien, aged 24 years, entered the Hospital Cochin, on the 11th of December, the eighth day of his illness, which had commenced with chilliness and shiverings that

lasted 48 hours, succeeded by cephalalgia, nausea, and bad taste in his mouth. 9th day. The face is flushed—the conjunctivæ injected—cephalalgia—tongue swelled, red, and furred—thirst urgent—epigastrium painful on pressure—diarrhœa—breathing oppressed, pulse strong and full, skin hot. *Lemonade with gum—forty leeches to the anus—frictions.* 10th day. The tongue very red—abdominal pains acute—twenty liquid evacuations from the bowels. 11th day. Great agitation—patient complains much of his head—face flushed—delirium—lips and teeth fuliginous—sensibility of the abdomen exquisite—pulse very quick—some tremor of the upper extremities. Sixteen leeches to the umbilical region, followed by a tartar-emetic plaster over the bites. 13th day. Same state of agitation—loquacity—dryness of the mouth—burning thirst—several liquid stools—swelling of the abdomen. *Emollient lavements.* 14th day. Last night was more calm; but the tongue is still red, and the pulse quick and sharp, with heat and dryness of skin. 15th day. The patient is better, and asks for food. All the symptoms are meliorated. The plaster is taken off, and there are numerous large pustules where the leech-bites had been. From this time, convalescence regularly advanced, and the patient entirely recovered.

We must pass over some interesting cases, where the event was equally fortunate through the same means, in order to give some particulars of a case that proved fatal, and where dissection took place.

Case 4. Etienne, aged 27 years, entered the Hospital Cochin on the 11th of October, stating that he had been ill a fortnight. He had passed the whole of a day in a damp cellar occupied in hard labour, and from this he dated his illness, which commenced with shiverings, cephalalgia, pains in his limbs, &c.—the shiverings coming on regularly in the evenings. He had taken plenty of hot wine and bouillon. 16th day. Face flushed—tongue coated in the middle, and red at the sides,—thirst urgent—abdomen not tender—diarrhœa—pulse high, hard, and frequent—skin covered with perspiration. *Lemonade with gum—15 grains of sulphate of quinine in the 24 hours.* 17th. The same accession of symptoms in the evening—the same treatment. 18th. Delirium was added to the evening paroxysm, with watery diarrhœa. 18 grains of sulphate of quinine. 19th. The evening accession was only known by a strong excitement of fever, the skin being moist. The sulphate of quinine suspended. 20th day. Tongue very dry and red—much alteration for the worse—pulse strong and frequent. 21st day. Delirium—decubitus dorsalis—nausea—pulse 90. 22nd day. Not much delirium, but great prostration of strength—tongue and lips fuliginous—abdomen distended. 23d day. Somnolency—head drawn backwards—subsultus tendinum—involuntary defæcation. The patient lingered on till the 38th day, when he became affected with tetanic rigidity throughout the whole body, and, in a few days more, he expired.

Dissection. The colon and the abdomen, in general, were distended with gas. The mesenteric glands were enlarged and inflamed—coats of the stomach red, but not softened—duodenum contained a yellowish matter—internal surface of the ileum covered with innumerable ulcerations, of various sizes, but increasing in number as the valve of the colon was approached. The mucous membrane in the interstices was much thickened. The liver and spleen were enlarged. There were various traces of inflammation and effusion in the brain and its ventricles, as well as in the spinal marrow. The latter was softened for the space of two inches opposite the sixth cervical vertebra, and also there was a softening abreast of the first vertebra (counting from below) extending down towards the eighth dorsal vertebra. There was no other lesion of any consequence in any part of the body.

From the foregoing and many other cases too numerous to introduce, M. Bally considers himself borne out in the doctrine which he maintains—namely, that the peculiar inflammation and ulceration seen in these fevers is not a common gastro-enteritis—the stomach being rarely affected; and that only secondarily—but an *ileo-diclidite*, or affection of the ileum and superior surface of the valve of the colon. M. Bally dwells on the importance of recognizing this pathology of the disease, if it be correct, as it will tend to restrain the routine practitioner from throwing in stimulants and tonics at an early stage of the disease, from dread of debility; and induce him to use proper depletion and cooling aperients, in order to prevent the ulcerative stage that may otherwise ensue. We recommend these observations to the attentive consideration of our brethren, so that they may be brought to the test of experience. As we said in the beginning of this paper, there is great reason to believe that these inflammations and ulcerations of the mucous membrane of the intestines, are much more common than practitioners are inclined to acknowledge—probably from want of that minute attention to post mortem examinations so conspicuous on the continent.—*Journal Gen. de Med.*

CASE OF FATAL SALIVATION.

Mercurial salivation, especially in adults, is so rarely fatal, that the following case deserves record—more as a curiosity, however, than as holding out any rule of conduct by which we can be guided in future; for here there was no misconduct on the part of the medical practitioner, nor any apparent peculiarity in the constitution of the patient, to contra-indicate the use of mercury.

Case. A soldier, 22 years of age, was admitted into a regimental hospital on the 22nd February, for the treatment of chancres situated at the base of the glans penis. Half a drachm of mercurial ointment was rubbed in

every second day, and a grain and a half of the oxymuriate of mercury being divided into four doses, he was ordered to take one dose on alternate days. On the 9th day, having made five frictions, and taken the above quantity of oxymuriate, salivation appeared, and the mercury was discontinued. The ptyalism ran high; and low diet, cooling aperients, gargles, and various other means were resorted to, but without the least effect in checking the salivation. The tongue became greatly swelled and indurated—the cheeks ulcerated—the gums were destroyed, and the teeth loosened. Deglutition was extremely difficult—and the nights sleepless. The venereal ulcers rapidly disappeared. Leeches were applied in succession to the face and neck, and opiates were given, with the view of procuring some sleep. But nothing arrested the progress of the ptyalism, and its devastations on the mouth, tongue, and throat. On the 5th of April, incisions were made into the tongue, with the hope of relieving the swelling of that organ; but little good effect resulted. By the 18th of April the salivation began to diminish, and ceased entirely by the end of the month. The swelling of the tongue disappeared, and the ulcers of the mouth healed. But the man continued pale and emaciated, complaining of sense of heat in the epigastrium, and having cough without expectoration. Early in May, expectoration appeared, and was accompanied by diarrhœa. He soon began to throw up purulent matter, and he died of rapid pulmonary consumption of the 14th May, not quite three months from the commencement of the mercurial treatment.

On dissection, the mouth, and parts contained it, were found perfectly healthy. In the left lung a large abscess presented itself, full of fetid matter, a quantity of which was extravasated into the bag of the pleura on that side. There was nothing particular in any other part of the body.—*Jour. Complementarie, Fevrier.*

The above is a melancholy case; but is it to prevent our administering mercury in a similar case of syphilis? Two or three drachms of mercurial ointment, and a grain and a half of oxymuriate of mercury in nine days, are not quantities of the mineral from which any danger can be apprehended, under ordinary circumstances—and the extraordinary circumstances, that is, the idiosyncrasies of constitution to which mercury may be poisonous, are utterly incognizable, till the mischief is done! —*Med. Chir. Review.*

PNEUMONIA AND GASTRO-ENTERITIS WITHOUT PAIN.

The different kinds of sensibility in the viscera and in the skin have led into great delusion, not only in chronic but even in acute diseases. The following case is worthy of record on this account.

Case. Nicholas Lesacq, aged 52 years, a sub-officer, was received into the VAL DE GRACE, on the 22d April, 1827, in the evening. On the morning of the 23d, Dr. Damiron, then on duty, saw the patient. His face was flushed, eyes sparkling and watery, skin burning hot, tongue dry, brown in the middle and vividly red at the sides, thirst urgent, pulse quick and cordy, breathing difficult, cough frequent, with copious ropy expectoration, dull sound in the right side of the chest, and the air not very freely permeating the other lung. The patient stated that he had been ailing since the 18th of April, with cough and fever, but that he felt no pain at any time, or in any part of the body, even on the fullest inspiration. This absence of pain embarrassed the physician a little, but an analysis of the symptoms left no doubt in his mind that there existed inflammation of the digestive and respiratory organs. Venesection—25 leeches to the epigastrium—diluents, &c. At 4 o'clock in the afternoon there came on a shiver, with stridor dentium. This rigour lasted six hours, and was succeeded by heat, but of no long duration, for the patient expired at two o'clock in the morning.

Dissection. Three fourths of the right lung were hepatised, the inferior portion or fourth being sound, and separated from the hepatised structure by a very distinct line. The left lung was black, but crepitous. The bronchia on both sides were greatly inflamed, and filled with a mucous secretion mixed with frothy blood. There were no tubercles. The heart was rather larger than natural. The stomach was very voluminous, and contained only an aqueous fluid. The mucous membrane of this organ was vividly red, with several brown and white stripes, but no ulceration. Some marks of inflammation were observed in the small intestines, but not to so great an extent as in the stomach.

The foregoing case shows that several viscera may be intensely inflamed, and yet produce no local pain appreciable by the patient. Epigastric pressure caused no uneasiness—a fact which we have often observed in real inflammatory disorders of the mucous membranes, while, in many cases of simple irritation, and where no inflammation existed, we have found the greatest sensibility to pressure at the scrobiculus cordis.—*Ibid.*

From the Medico-Chirurgical Review.

Commentaries on some of the more important of the Diseases of Females. In Three Parts. By MARSHALL HALL, M. D. F. R. S. E. Octavo, pp. 376, with eight coloured plates. Longman and Co's. 1827.

Dr. Hall's name has been so long familiar to our readers, that it is unnecessary to recall to their recollection the several works which he has published—and which have uniformly characterized him as a most acute as well as talented observer of the phenomena of diseases. It is now nearly ten years since his Essay on the "Mimoses, or Disorders of the Digestive Organs," attracted considerable attention, and stamped the author as a physician far beyond the general run of routine

practitioners, who too often take for granted what has been first impressed on their minds by their teachers, and dislike the trouble of afterwards observing, comparing, and investigating, and thinking for themselves. The only fault, indeed, which has been objected to Dr. Hall, is that of being too minute in his distinctions—and if this was a *fault*, it was founded on his being to minute and accurate in his observance of the various shades and differences of diseases—a supererogation that will be readily pardoned!

The present work is not original—but a consolidation and emendation of the author's former publications, in which he has entered more fully into the investigation of those diseases which formed the subject of his essays and papers, "in the conviction that a renewed inquiry into their diagnosis or essential differences under a similarity of appearances, and into their nature, pathology, and treatment, will lead to many important and beneficial results."—*Pref.* The author modestly considers this inquiry "as only just begun, and as still affording great scope for further investigation."

These commentaries are divided into three parts—the first embracing those morbid affections incident to female youth—the second comprehending the disease which supervenes during the puerperal state—and the third treating of those affections incident to the middle and later periods of female life. To each of these three parts we shall dedicate an analytical article, passing lightly, of course, over those subjects which have been already reviewed in this series of our journal.

I. *Disorders incident to Female Youth.*

Dr. Hall thinks that the peculiarity of the female constitution which principally modifies the disorders of the sex, depends chiefly on "the greater development of the capillary vessels, and the greater susceptibility of the nervous system, than are observed in the male sex." Hence results a greater tendency to those affections attended with pallor, œdema, and even hæmorrhagic effusions. The female is evidently of more sensitive nerve than the male, and is more subject to painful affections of the head, heart, side, and other parts of the body. The growth of the body influences the general health, and the general health influences, in turn, the growth of the body. A too rapid growth involves debility—while debility often impedes the growth, and interrupts the building up and proportioning of the spine, the pelvis, &c.

The epoch of primary menstruation, like the growth of the body, has a considerable influence on the health, and *vice versa*. So, also, derangements in the return and flow of the catamenia, while they are almost always the effect of some disorder of the general health, become, in turn, a source of constitutional disorder. The state of the uterus and its secretion influences other parts of the body, and especially the mamma, which usually swells and becomes tender at the approach of puberty and the menses.

But there are other states common to the sex, which greatly modify their health; and among these, the confined and loaded condition of the bowels deserves great consideration, together with the injurious effects of sedentary habits. The want of sufficient corporeal exercise draws with it a defective peristaltic action of the intestines, and consequently a remora and vitiation of the fæcal remains of the food. To this may be added the inattention to the calls of nature. Does the ampler size of the pelvic cavity tend to the accumulations in the bowels of females? Dr. H. seems to speak in the affirmative. This remora, he observes, deranges the whole of the chylopoietic functions.

"And, first, the state and functions of the parts within the mouth become obviously disordered; the secretions are morbid, the tongue loaded and swollen, the gums and internal parts of the cheeks red and tumid, the teeth decayed, the breath tainted, and the saliva sometimes profuse and offensive.

"The complexion and general surface of the body then become morbidly affected, and there are pallor, icterode, and other hues, morbid states of each of the textures composing the skin, and frequently œdema. These conditions of the complexion, and of the general surface, vary both in their seat and appearance with the kind and state of the original disorder, and with the state of the tongue and internal mouth. With each of these associated appearances there is a peculiar condition both of the functions of the intestinal canal, and of that of the uterus; and all these affections are variously and characteristically modified by the duration of the malady."

The organs of digestion are disordered—nutrition is impeded—strength is reduced—and the liver (our author affirms) is frequently enlarged. Dr. Hall, however, cautions the medical practitioner against considering every icterode hue in the complexion or general surface as indicating disease or even disorder of this organ. "This state of the cutaneous surface is frequently the effect of a loaded condition and impaired function of the alimentary canal; and it is, in various instances, an affection of each of the cutaneous textures, or of the cutaneous circulation, altogether independent of any tinge of bile."

No organ, Dr. H. observes, is more influenced by the state of the intestinal canal than the uterus. With the changes observed in the state of the tongue, complexion, and cutaneous surface, "precisely proportionate changes take place (Dr. H. avers) in the state of the uterine discharges." The state of these discharges may, he says, in many instances, be ascertained by that of the tongue and complexion.

Dr. H. again adverts to the baleful effects of sedentary habits, and the almost total neglect of regular and active exercise in the open air. The occasional and formal prome-

nade of a string of boarding school misses in the train of their governess, and that only on a fine day, is a mere mockery of that vigorous muscular exercise which nature prompts and craves for in early life.

II. *Disorder of the General Health—Acute Form.*

The general character and symptoms of this disorder are (Dr. H. thinks) very distinct; but its complications are very various, and sometimes predominate over the other symptoms, so as to resemble certain topical affections, and thus lead the practitioner astray.

"This affection, even in its more acute form, comes on insidiously, and the patient becomes gradually and insensibly incapacitated for exertion, either of mind or body. This state of unconscious disorder perhaps endures for many months, before it attracts the serious attention of the patient or her friends; and when a medical opinion is taken, it is usually sufficiently characterized by a general feeling of weakness, with tremor, headach, or vertigo, fluttering, faintishness, tendency to perspiration on the least exertion or surprise, susceptibility to hurry and agitation, weariness, aching, and loss of flesh: and with these symptoms there are peculiar states of the countenance, of the tongue and internal mouth, of the general surface, and of the evacuations, which I now proceed to describe. I would first observe, however, that although the accession of this morbid affection is usually slow and insidious, it is occasionally more rapid, being induced by the occurrence of some other indisposition, or of a fall or other accident.

"Soon after the commencement of this disorder, the countenance is observed to have become rather pale and thin; the lips are pale, and, with the chin, are frequently observed to be tremulous on speaking; the surface of the face is frequently affected with an appearance of oily and clammy perspiration, especially about the nose; and there is usually a degree of sallowness and darkness of the complexion in general, but principally about the eyes and mouth. The face is sometimes rather bloated, and the skin coarsish, at first; but afterwards, there is some degree of emaciation.

"The tongue is almost invariably much loaded; sometimes, however, only slightly, whilst its edges are clean and red. In other severer cases, a load has been formed over the tongue, and has peeled off all at once, or in patches, leaving the surface of the tongue morbidly red, smooth, and tender. But generally the tongue in the acute form of disorder of the general health, is loaded, swollen, and œdematous, marked by pressure against the contiguous teeth, and formed, more or less, into sulci or plaits, and presents upon its upper surface numerous enlarged papillæ; the gums are also swollen, and sometimes red, at others palish, and they occasionally bleed; the inside of the cheeks are, like the tongue, frequently impressed by pressure against the teeth. This state of the tongue and of the gums is accurately represented in Plate I. figures 1, 2, and 3. To observe the sulci in its surface, it is sometimes necessary to distend the tongue by the pressure of two fingers, separating them in a lateral direction. The indentations in the edges of the tongue are most obvious early in the morning; but they are, as well as those in the inside of the cheeks, always obvious enough on a careful inspection. With this state of the surface of the tongue, the gums, and cheeks, there is frequently a slight degree of morbid redness, and, perhaps, of tumidity about the tonsils and soft palate; the teeth, and the mouth in general, are foul; the saliva viscid, especially in the throat; and the breath tainted and fœtid; and I have occasionally known a degree of bleeding to take place, not from the gums alone, but from the posterior parts of the mouth; and this has chiefly occurred during the night, so that the patient has been awoke, and has probably been greatly alarmed, by finding a certain quantity of blood in her mouth.

"The tendency to perspiration is observed on the slightest surprise or exertion, and occasionally, though not very often, in the night, or early in the morning; the skin is, in general, cool, rather moist, and clammy; the hands and feet are apt to be cold, the fingers rather livid, and the nails frequently assume a lilac hue: this state of the hands accords a little with the representation given in Plate VIII. figure 1, but not entirely, the tips of the nails becoming opaque only in some protracted cases of disorder of the general health.

"The patient is frequently affected with nervous tremor, observed in a quivering of the lip or dimpling of the chin on speaking, or when at all agitated. There is also tremor on holding out the hand, or on carrying a cup of tea, for instance, to the mouth; on attempting to stand erect or walk, or on being fatigued or hurried. The tremor, in some cases, has formed the most remarkable feature of this affection; in others it has been far less observed; but it is rarely, if ever, entirely absent. The patient feels unaccountably feeble and weary, and suffers from a sense of aching after slight exertion.

"There is an early, but very slow and gradual emaciation; and it is most interesting to remark, by weighing the patient, first, the still continued progress of the loss of flesh for a time; and then the cessation, and, lastly, the restoration from this fearful morbid process, on the institution of a correct mode of treatment.

"The patient experiences headach or vertigo, and much nervousness and susceptibility to hurry and agitation. There is sometimes heaviness for sleep; sometimes great wakefulness and restlessness; sometimes incubus; and, sometimes, though rarely, delirium; occasionally, there is loss of memory and absence of mind. Indeed the mental, sentient,

and nervous powers appear all to be much under the influence of this affection of the general health.

"The patient is liable to experience faintishness in the upright position, if it be sustained for a little time. There is almost universally a peculiar sense of fluttering about the heart and pit of the stomach. The pulse is frequently nearly natural, but it is sometimes rather frequent, and it is easily accelerated. It is also apt to become irregular and intermittent." 21.

The state of the appetite accompanying the disordered condition of mouth already described, is various—sometimes impaired, sometimes unnaturally craving, without the power to take food. The digestion is apparently good in some—in others, it is attended with distention, flatus, eructation, pyrosis, and even vomiting. The bowels are at first constipated—afterwards relaxed and confined alternately—the evacuations being unnatural in both states, especially in the relaxed condition. Pain in some part of the colon or rectum is not uncommon. The urine is occasionally loaded at the beginning; but afterwards pale. The uterine discharges will probably be found to correspond with the others, if accurately observed—but this can seldom be done. Dr. H. adverts to the *constancy* of the morbid appearances in the countenance, mouth, and tongue—as contrasted with the variability of the other morbid phenomena. Hence, it is on the former chiefly that the accuracy of the diagnosis must rest.

After these observations on the general character of the complications, our author, with his wonted minuteness, proceeds to describe each of these complications separately, with the view of pointing out the diagnosis between them and idiopathic diseases of the same organs. He regrets that the diagnosis is frequently to be founded on the general symptoms, since an idiopathic and organic affection of some part may coexist with disorder of the general health, and, consequently, what was a mere functional complication in the beginning, may become organic in the sequel. He properly observes that it is always a suspicious omen when relief does not follow the due administration of remedies for the primary disorder, especially when the head is effected.

"The most usual affections of the head in this disorder, are pain and vertigo. If there be the symptoms of acute disorder of the general health already described, and if the headach or the vertigo has become habitual, or has long subsisted in a varying character, and especially if the usual remedies for fulness of the blood vessels of the head have been tried without relief, or with transitory relief only, it may be presumed that the affection of the head is symptomatic only, and that it will yield to the plan of effectual but cordial purgatives, to be described hereafter. This opinion will be further substantiated, if the headach or vertigo be conjoined with sickness, faintishness, or cold perspiration, or if there be paleness of the countenance, and some degree of loss of flesh; and still further, if relief be obtained by the administration of warm aperients and a regulated plan of diet." 27.

During the whole course of this disorder, the patient is peculiarly liable to fluttering, irregular action, or violent palpitation of the heart, or even syncope. If there be organic disease of this organ, exertion will always exasperate it—if it be only functional, then, in the intervals of attacks, exercise can be borne without inconvenience. Hæmatemesis and melena are not uncommon complications of this form of the nameless or Proteiform malady, formerly designated by the term MIMOSIS, or imitator, by our talented observer, which term we find he has now dropped. The hæmatemesis is, of course, obvious enough; but the melena may exist without detection. Dr. H. thinks that it frequently occurs unknown and unsuspected by the patient. Jaundice is another complication, together with pains in various parts of the body, giving suspicion of gallstones, inflammation of the pleura, liver, spleen, kidney, or other part of the body. "There is sometimes a sensible hardness, or tumour, which appears to consist in a loaded state of the intestines." Sometimes there is pain so severe as to resemble TIC DOULOUREUX—sometimes spasmodic or convulsive affections—sometimes such loss of muscular power, especially in the lower extremities, as to resemble paralysis. "Each of these cases is to be distinguished by a reference to the constitutional symptoms."

TREATMENT.

The first object is to evacuate and regulate the bowels.

"It would be difficult, however, to determine whether more benefit has accrued from the use, or harm from the abuse, of purgative medicines in the present day. It does not appear to have been observed, that if these medicines be given unduly, they induce or keep up, in many instances, the very disorders they were intended to remove. This is true, not only in regard to the stomach and bowels themselves, but also in regard to some of those organs which are so apt to be affected symptomatically. In fact, if the due limits in giving purgative medicines be exceeded, a state of irritation and distention is maintained in the alimentary canal, of exhaustion and nervousness in the general system, more distressing than the original disorder." 30.

This is a doctrine which we have been preaching for some years—and the longer we live, the more the evidence of its truth accumulates.

Purgative medicines should, therefore, be given (where their employment is necessary for a long time) in such manner and combination as not to produce the effect of keeping up irritation in the line of the alimentary tube.

"This is to be done (says Dr. H.) by conjoining some cordial with the purgative, and by guarding against too considerable or too repeated doses of it; and by attention, at the same time, to a mild and nutritious diet."

After a free purgation, therefore, at the beginning, the object is to induce one full and consistent evacuation daily, avoiding, as much as possible, all teasing and irritating operation of medicine.

"The decoction of aloës, the infusion of rhubarb, and of senna, the tinctures of aloës, rhubarb, and senna, the vinum aloës, the Rochelle and Epsom salts, and manna, and aloës and rhubarb, variously formed into pills, are the remedies which I have thought most suited to effect the object which I have described." 31.

In cases where aperient medicine has proved irritating, five or six drops of laudanum, with twenty of liq. ammoniæ, added to the opening draught, have proved useful. Mercurials, in this class of complaints, are not often employed by Dr. Hall, except where the alvine evacuations do not resume their healthy aspect by ordinary means. Neither is our author very friendly to cordials. "They only excite feverishness; and, when the bowels are brought to a natural state, and when irritation and exhaustion are obviated, medicine has done its office." The rest is to be accomplished by diet, exercise, air, sponging the body, &c. On the subjects of diet, clothing, &c. our author is judicious, and his observations are entitled to respectful attention.

Before quitting the subject of the treatment in acute disorder of the general health, Dr. H. makes a few observations on the remedies for its various complications. On these we shall not dwell, as it is obvious that the primary object is to treat the general disorder, directing attention to the local or symptomatic affections, only when they become prominent or distressing. Thus, affections of the head must be met by cupping or leeching till the brain is relieved, if there be evidence of vascular action there; but it will not seldom require all the penetration of the practitioner to discriminate between headach from gastric and intestinal irritation, and that which results from actual fulness of blood, or inflammation of the membranes. Dr. H. remarks that, "in all those cases attended by hæmorrhage, he has been accustomed to prescribe the pilula hydrargyri." We should like to know his reasons for this. Our author is very friendly to the use of injections of warm water, in loaded, costive, or disordered states of the bowels, as a remedy that "may be beneficially substituted for much of the purgative medicine ordinarily prescribed, especially in females." It certainly is a very useful auxiliary; but we have reason to know that it will not often do without the aid of medicines which act on the upper bowels, and bring disordered secretions within the reach of the injection.

CHAP. III.—*Protracted General Disorder.*

The transitions from the more acute to the more protracted forms of disorder of the general health, are quite imperceptible. The affection may, Dr. H. observes, be considered acute perhaps during the first year of its existence. But it has generally subsisted some years before it assumes the characteristic form about to be described. In some cases there would not appear to have been any preceding acute form of the disorder, the malady having stolen imperceptibly on the patient. In this form, the states of the complexion, of the tongue and internal mouth, of the general surface, and of the bowels, are even more strongly characterized than in the more acute form of the disorder. But "complications," observes Dr. H. "are usually of a totally different character."

"The countenance, in the protracted form of disorder of the general health, has gradually assumed a state of permanent paleness and sallowness, which are, however, by no means very considerable in all cases; the prolabia have lost the hue of health; and together with a diffused sallowness, a more morbid discoloration is usually observed occupying the eyelids, and encircling the mouth. The surface of the face is not affected with perspiration, as in the acute form of this disorder, nor is there the same degree of nervous tremor.

"The state of the tongue is most remarkable. It has, in the first place, generally become gradually clean and free from load; together with the whole internal mouth, it has lost its clamminess, its mucous covering, and its halituous appearance; and the secretions of the mouth and the breath are less offensive, and I have known them to acquire the peculiar odour of new milk. The morbid character of the tongue is evidently not of recent formation; it has no longer those acute impressions from its pressure against the teeth, observed in the acute form of this disorder; the indentations are still very marked, however, but their edges are rounded off; the sulci on the surface of the tongue are, in many instances, still more marked even, but they also have assumed a different character, evidently the impress of long duration; the papillæ are frequently still more enlarged, being much elongated, in some cases, and expanded laterally in others." 43.

These appearances are admirably portrayed in the second plate. Dr. Hall affirms that, "from the peculiar modificaton of morbid appearances in the tongue, we are also enabled to judge distinctly of the *actual state* as well as of the stage of the disorder." Our author says we can, from the state of the tongue, "form an accurate *conjecture* relative to the length of duration of this morbid affection." We hope Dr. Hall has not over-rated the diagnostic value of lingual phenomena. We have, all our lives, paid much attention to the appearances of this organ in diseases; but we confess we have not arrived at any

thing like the accuracy of diagnosis which Dr. Hall has acquired.

Dr. Hall informs us that the *lobulated* appearance of the tongue has been often found by him to accompany simple enlargement of the liver, "of which disease it is therefore a symptom." The general surface, in this state of disorder, is very various—generally sallow and dry, or at least not perspirable. The nails also undergo some remarkable changes. "They first become dry, then brittle, and then begin to split at their points, until at length the patient cannot take a pin out of her dress without breaking them; afterwards they sink in irregularly in their centre, turning upwards at their points, which are variously cracked and split."

"In connexion with the general surface, it is important to remark, that the patient affected with protracted disorder of the general health is peculiarly subjected to several morbid states of the integuments, and of those internal surfaces which are immediately continued from the skin, such as, furunculus, paronychia, hordeola, erysipelas, especially of the nose, erythema nodosum, urticaria chronica, lichen, a harsh and cracked state of the skin surrounding the prolabia, purpura, inflammation, ulcerations or pustules of the conjunctiva, decay of the teeth, a morbid state of the gums and internal mouth, aphthæ of the tongue and inside of the lips or cheeks, chronic sore throat, deep ulcerations of the tongue, &c. and the occurrence of these local affections should always lead us to inquire into the state of the general health.

"There are, in the protracted form of this disorder, less tremor, debility, loss of flesh, and tendency to faintishness, and perspiration, than in the acute, although they are by no means entirely absent. The patient is still incapable of exertion, apt to perspire from effort or agitation, and subject to symptoms of affection of the head, heart, chest, and of the digestion; only usually in a slighter degree than is observed in the acuter form of this affection.

"The bowels, especially, are in an extremely deranged state, either constipated, or with scanty fluid, and fetid evacuations, and, more frequently than is suspected, mixed with blood.

"The uterine discharges become retarded in their returns, of short duration in their flow, discoloured, or pale, and scanty, frequently attended by much pain, and often succeeded by leucorrhœa.

"The appearance of the urine is, like all the other symptoms, very variable; sometimes the patient becomes subject to gravel.

"There is sometimes a degree of œdema, and sometimes a state of cachexia." 48.

The treatment is the same as in the acute form of disorder, excepting that more caution must be used in the exhibition of the different remedies—especially of purgatives.

"In addition to the former plan, there are questions, in the present case, respecting several other remedies; as the sarsaparilla. the sulphate of quinine, and the sulphate of iron. The two first, I am of opinion, may be safely given, and will be found of considerable advantage. The sulphate of iron requires rather more precaution in its administration, but is, I believe, a more efficacious remedy, when suitably given, than either of the former. In order that the sulphate of iron may be prescribed with advantage, the bowels must have been first freely evacuated, and then properly regulated for some time; the tongue must be clean, and the prolabium and countenance in general pale. In such a case, one grain of sulphate of iron, with some aromatic, may be given three times a day; and I think those times should be chosen when the stomach is not empty. I have sometimes even thought it advantageous to give this medicine during meals.

"The sarsaparilla, sulphate of quinine, and sulphate of iron, may also be advantageously given together." 50.

Chap. IV.—*Chlorosis.*

Dr. Hall is of opinion that this curious affection arises from the same causes of disorder of the general health as have already been detailed, and that the causes "of a sexual character," which have been assigned by authors, have rarely any thing to do with the complaint. It steals on in a very insidious manner, but has, according to our author, three pretty distinct stages. "It may be characterized in general as uniting a morbid paleness of the complexion, tongue, and general surface, with recurrent pain of the head, or of the side, palpitation, fluttering, and nervousness, and frequently attacks of hysteria—with some tendency to loss of flesh and to œdema." The various features of this disease, as portrayed in the general surface, the tongue, the countenance, the different functions, and the several secretions and excretions, are delineated and described by our author with more than German minuteness, and we must say with fidelity. For these descriptions we must refer to the volume itself, from page 51 to page 59.

Dr. Hall despairs of giving any thing accurate or specific in regard to the pathology of this and other forms of disorder of the general health. "There appears to me not to be a system, an organ, a texture, or even a fluid in the animal economy, which does not suffer in different instances of this multiform disorder."* A page farther on, however, Dr.

* "There is in chlorosis a remarkable state of the capillary system of circulation, both of the vessels and of the fluids; it is this which gives origin to the exsanguinous appearance of the countenance, prolabia, tongue, gums, and general surface; to the tendency to œdema; and to different species of hæmorrhages, especially those of the mucous and cutaneous surfaces, as epistaxis, melæna, hæmatemesis, and even purpura; and it is from this circumstance that the catamenia

Hall gives it as his opinion, that "the first cause is in the state of the bowels"—that "a concurrent cause is the peculiarity of constitution already described (humoral pathology)—and that an exciting cause is the inactive and sedentary mode of life usually obtaining in female youth." The stomach, Dr. H. thinks, suffers from its contiguity with the intestines; but really we see no reason why the stomach should not suffer from the same general causes that act on other parts of the system, including the intestines, and that, as soon as any other organ or structure in the body. We agree with our author, however, that it is in the digestive organs the first and principal manifestation of the Proteian malady (of which chlorosis is merely one of the numerous shapes) is to be found. This *effect* of numerous causes, moral and physical, becomes, in turn, the *cause* of the numerous other phenomena presented in various parts of the body. That the state of the circulating fluids is deteriorated in this complaint there can be little doubt; and this deterioration of the blood may well become a cause of impaired vital energy in the heart, brain, and other organs. The painful affections of parts, in chlorosis, have sometimes been mistaken for organic disease; and the means employed as remedies have then increased the malady; but a careful examination of the constitution will readily detect the nature of the complaint.

"The treatment of this form of disorder of the general health must be begun by a due evacuation of the bowels; but the use of mercurials, and of active purgatives in general, requires still greater precaution, and the addition of mild cordial remedies is still more necessary, even than in the forms of disorder described in the two preceding chapters.

"Of the class of aperient remedies, aloes and rhubarb appear to me to be best adapted to the cure of chlorosis; the first of these may be given in the form of the decoction, the wine, the simple and compound tinctures, the latter in those of the infusion and the tinctures, and these may also be variously combined together, and, if quite necessary, with manna, and the Rochelle salt.

"When the bowels have, by these means, been fully but gently regulated for some time, different preparations of iron, but especially the sulphate, become specific in this disorder,—gradually restoring the complexion, the general surface, and the uterine discharges, to their healthy state. The condition of the complexion, and of the catamenia, constitutes the true indication for the employment of these remedies, and of their beneficial effects when these begin to be displayed. I do not mean to confine the use of chalybeates to the cases in which the prolabia are exsanguinous and the catamenia are pale, but I can affirm that their efficacy is most unequivocal in these cases.

"The painful affections of the head, of the sides, and of the abdomen, which are so apt to occur in complications of this morbid affection, are generally soon removed by an attention to the original disorder; but, in the mean time, they admit of being much relieved by the application of a spirituous lotion to the former part, or of a liniment composed of the soap liniment, the sal volatile, and the liquor ammoniæ, to the latter, or, if necessary, by a blister. If any further remedy be required, cupping may be tried; but it is extremely important, in chlorosis, to avoid taking blood as much as possible." 67.

Dr. H. remarks, in conclusion, that there is a peculiar species of dropsy, of which he has not seen many instances, but which appears to be allied to this disorder. It is attended by all the phenomena of chlorosis, "and it would probably yield to the remedies of this morbid affection."

Chap. V.—This chapter is devoted to certain forms of disordered health, attended by other changes in the complexion, besides those already noticed. These are chiefly the following, viz. first, the icterode, or yellowish—secondly, the light lead hue—and, thirdly, the ring of tumid darkness occupying the eye-lids. Dr. H. avers, that all these morbid states of the complexion are "dissimilar from that observed in chlorosis and from each other." "Each denotes a distinct form of disorder, having distinct characters and tendencies, being associated with a distinct train of symptoms, and *requiring distinct modes of treatment.*" 69. If this be the case, and if it be true, as our author thinks it is, "that both the *kind and the seat* of these morbid changes vary in the different cases," then we have a labyrinth to wade through which will require the stoutest heart to encounter, and which very few medical practitioners will attempt to unravel.

It is an extremely difficult matter to hit the happy medium between impracticable refinements and useless generalities in medical matters. With all our respect for the talents of Dr. Hall, we cannot but fear that he has verged occasionally to the former extreme. We do not indeed doubt that, with his own tact for minute observation, the distinctions which he has drawn, may be recognized, and even turned to useful account; but we question whether one practitioner in twenty will be able to follow him, or profit by him in some of his discriminations. The following quotation will show that the *difference of treatment* between these different shades of disease really amounts to nothing.

"The remedies for these disordered states of the complexion are such as induce and continue alvine evacuations of ample quantity and natural colour. Mild mercurials are

---

become almost colourless and aqueous. I have observed the blood which has flowed from the nose scarcely to tinge the sheets, and that taken from the arm, to resolve itself almost entirely into serum, with scarcely any crassamentum. This disorder affords, therefore, one of the most unequivocal examples of humoral pathology." 61.

efficacious, in conjunction with mild purgative medicines: they require to be given for a very considerable length of time, and should not, therefore, be repeated too frequently.

"In other respects the treatment is similar to that of the other forms of disorder of the general health; the objects being to restore the healthy state of the bowels, and of the uterine discharges, to give vigour to the system, and, if necessary, to remedy the different local complications.

"Sponging, and much friction of the general surface, warm clothing, and a particular attention to guard against coldness of the feet, have appeared to me of great use in restoring the proper state and functions of the cutaneous surface." 74.

Thus we see that the same treatment is laid down for these three varieties, each of which was said to require a *distinct mode of treatment*, while the methodus medendi in this trio really differs so little from that recommended in "the other forms of disorder," as to be scarcely cognizable.

Chap. VI.—*Hysteria.*

This disease is divided by Dr. Hall into three forms or varieties—the mild, the severe, and the inveterate. The common mild form is so well known as to require no remark. The severe form, like Proteus himself, assumes such a variety of shapes and characters as to pass undetected in numerous instances, even under the eyes of the most experienced practitioners.

"The commencement, course, or termination of this, and indeed of every form, of this complaint, is generally marked, and the case distinguished, by the signs of some inordinate mental emotions, to which it is most important to revert, as they afford, in many cases, the most characteristic symptoms of this disorder.

"The attack is frequently ushered in by an unusual appearance of the countenance,—change of colour, rolling of the eyes, distortions, or some spasmodic affection of the muscles of the face.

"A state of general or partial, of violent, or of continued convulsion, or of fixed spasmodic contraction, takes place, and displays every possible variety in mode or form, as trismus, tetanus, contracted hand, distorted foot, or twisted legs.

"The severe form of hysteria sometimes consists chiefly in a violent general or partial pain and throbbing of the head; occasionally this pain is confined to some particular spot even, and is so acute as to have obtained the appellation of the clavus hystericus; sometimes there is great intolerance of light and noise; sometimes a state of stupor, sometimes delirium. This state must be carefully distinguished from an idiopathic affection of the head.

"The respiration is frequently much affected. An oppressive or suffocative dyspnœa takes place; or the breathing becomes rapid, anxious, and irregular, or variously attended with rapid heaving of the chest, or with a spasmodic affection of the diaphragm inducing a peculiar elevation of the abdomen, or an equally peculiar succussory movement of the trunk in general; sometimes the respiration appears to be suspended for some time, the pulse continuing to beat as before; in this case it will generally be found, on attentive examination, that the breathing is performed by the diaphragm.

"A peculiar crowing noise or screaming is apt to occur in this affection; and there is occasionally great hoarseness, or even complete loss of voice, continued for a considerable time.

"There is sometimes a violent, dry, hoarse cough, continued or recurrent in paroxysms; and sometimes there is an attack which resembles the most suffocating form of croup.

"Palpitation of the heart, or syncope, are usual affections in hysteria; the pulse is, otherwise, often very little affected.

"There is occasionally, acute pain of some part of the chest, of the diaphragm, or of the abdomen. This affection might easily be mistaken for inflammation. It is often such that the patient cannot bear the slightest, and most superficial touch even; and it is by this very circumstance that it is sometimes distinguished from pain of an inflammatory nature, which is only aggravated by positive pressure." 84.

The inveterate form of hysteria consists, according to Dr. Hall, sometimes in an almost perpetual agitation of some part of the body, the limbs, the respiration, the throat, or the stomach—sometimes in a state of perpetual contraction of the hand, foot, or some other part of the body. In some instances, there are seizures which it is difficult to distinguish from epilepsy, paralysis, or mental alienation. In short, "hysteria is characterized by affecting in the same, or in different instances, singly or conjointly, all the several systems which constitute the animal frame"—all the organs and functions of the body—all the faculties of the mind!

Yet it cannot be denied that it is of great importance to distinguish the masked forms of this malady from the inflammatory and organic diseases which it imitates. They are every day confounded, especially by young practitioners, and much mischief is done, besides the false prognoses that are given. Such errors are to be avoided by a cautious inquiry into the history of the case, the mode of attack, the immediate exciting cause, and the early symptoms. With all these precautions, however, the practitioner will often be deceived, and only discover his mistake in the course of the disease, when he finds that local affections, which he considered to be inflammatory, are aggravated instead of being relieved by depletion—especially sanguineous depletion.

The methodus medendi in hysteria laid down by our author forms a striking contrast to the minuteness of his descriptions.

"The remedies in hysteria are such as are required by the state of constitutional disorder, and especially by that of the stomach and bowels, and by that of the uterus, the functions of which require to be restored as quickly as possible. Aperient medicines, fomentations of the feet, and of the lower parts of the abdomen, are amongst the first remedies.

"Then follow the means of relieving the urgent symptoms, which are as various as those symptoms themselves.

"For the affection of the head, a lotion of spirit of wine and rosewater is of great service, and, if necessary, a small blister may be applied to the nape of the neck; with these remedies, the tincture of hyosciamus, sal volatile, and æther may be given, or a saline effervescent draught.

"For the pain of the chest or abdomen, a liniment with sal volatile or a fomentation of hot water, may be applied with similar internal remedies.

"The same observations apply to the other forms of hysteria. In all it is of the first importance to act upon the alimentary canal and uterus, then to sooth, and, lastly, to relieve the local pain or distress." 89.

In a short chapter (VII.) which succeeds, Dr. H. has offered some cursory observations on certain anomalous forms of disordered health in young females, all of which, however, appear to hinge upon defective energy in the stomach and bowels, and consequently are attended with debility, and more or less emaciation. Amenorrhœa is also a concomitant symptom. The remedies are mild aperients, tonics, slight cordials, with alternate repose and exercise.

Chap. VII. This embraces a disorder of general health which our author has observed in females returned from India.

Dr. Hall, arguing on the fact that menstruation occurs earlier in tropical than in cold climates, concludes that the uterus suffers in females who migrate from Europe to India. He observes that the catamenial flow is apt to become profuse in the hotter regions of the earth, attended, in many instances, with disposition to mænorrhagia, and even to abortion and leucorrhœa.

"The result of this state of things is, that the patient becomes affected with extreme exhaustion, and is often compelled to return to Europe. This change of climate is generally of the utmost service in restraining the uterine discharges; but the effects of the previous drain and losses of blood do not so soon cease, and the patient presents all the symptoms of exhaustion, either in that form which is attended with re-action, or in that in which the symptoms of re-action do not manifest themselves. In addition to exhaustion, there are also very frequently the effects of intestinal irritation, the bowels being extremely apt to become confined." 102.

Two cases in illustration are related by Dr. Hall, for which we refer to the work, from page 103 to 109. The treatment differs little, if at all, from that which has been already detailed.

Chap. VIII. This chapter, which only occupies nine pages, discusses "the diagnosis and symptoms of some local inflammatory diseases." Dr. H. commences by observing that it is the fashion of the present day to consider every local pain and other affection to be inflammatory, "and forthwith to use the lancet." Our author is anxious not to mislead any young practitioner by drawing him into a neglect of this useful remedy, when actual inflammation exists.

"I would even say that it is far better that the lancet should be used twenty times unnecessarily, than that it should be neglected once when really necessary. But still it is my duty to state, that I have seen many, very many cases of protracted indisposition which have entirely ensued from the misapplied and unnecessary use of the lancet." 112.

How are we to avoid the error? By a careful diagnosis.

"Whenever there are the appearances of the complexion, tongue, and general surface, which have been described as obtaining in the different forms of disorder of the general health, the presumption will be, that any local affection is only a symptomatic complication of that disorder. This presumption is strengthened if there be an entire absence of any external cause of the local affection. But it is to be carefully observed that it is, still, only a presumption, and that there may be a concurrence of idiopathic local disease with disorder of the general health,—or that that which was symptomatic at one period, may become actual disease in its course,—especially in the more acute form of disorder of the general health described in the second chapter of this work;—for this very rarely, perhaps never, occurs in the other forms of this disorder.

"If there be many of the general symptoms of disorder of the general health which affect the head, the heart, the breathing, the nervous and the muscular systems, &c. there is a still further, and, I think, a still stronger presumption that any predominant topical affection is symptomatic; for I have repeatedly observed that idiopathic diseases frequently subdues these symptoms, even when they had previously existed, and gives a definiteness to the affection which it had not before, and which returns only when the idiopathic disease is subdued." 114.

Dr. Hall would not say that hysteria is incompatible with idiopathic inflammatory disease; but he is persuaded that attacks or symptoms of hysteria very seldom concur with the active inflammation of a vital organ. It is sometimes super-induced by the remedies for inflammation, denoting then that those remedies have mitigated the disease and affected the constitution; but he believes that in the greater number of cases where hysteria comes on after bleeding, the original complaint was not inflammation, but disorder

of the general health with some local complication.

"Another source of distinction exists in the effects of the remedies which have been employed. Early fainting, from blood-letting, is observed in the complications of disorder of the general health; inflammation, on the other hand, seems to protect the system from the effects of loss of blood: in the former case, too, there are often mitigated sufferings at first, but an aggravated state of complaint on the return of reaction after bleeding; whilst in the latter, this is certainly not observed, but the disease may be found to be unsubdued, or perhaps pursuing its progress." 116.

On the other hand, the complications of disorder of the general health are more relieved by purgatives than an inflammatory affection would be, while the appearance of the evacuations affords an additional source of diagnosis. The administration of lowering remedies in disorder of the general health renders the patient nervous, irritable, and feeble, in a degree not observed in inflammatory disease.

Dr. Hall makes many judicious observations on the diagnosis in particular local affections, as of the head, the pleura, the peritoneum, the lungs, &c. for which we must refer to the work itself.

Chap. IX.—The subject of this chapter is tubercular affection of the abdomen. This is a most insidious, slow, and generally fatal disease. In Dr. Hall's experience, there are more females than males affected with the complaint. The age at which that peculiar form of the disease of which Dr. H. is now speaking, occurs, is usually, according to his experience, from fifteen. The following are the diagnostic symptoms by which our author is guided.

"Tuberculous disease in the abdomen is greatly characterized by three symptoms,—great tendency to coldness and lividity of the extreme parts of the body, a frequent pulse, and slow but progressive emaciation.

"The aspect of the countenance is altogether peculiar, especially in cool weather, together with an obvious emaciation and expression of languor and disease; the end of the nose is livid in colour, and cold to the touch; and there is, in general, either paleness or a slight degree of flushing.

"Similar observations may be made respecting the general surface. There is emaciation; the skin is soft, and apt to become moist, and there are frequently perspirations during sleep, especially in the early part of the morning; to prevent this perspiration, the patient frequently endeavours to keep awake; there is an undue sensibility to cold observed on the slightest unexpected exposure,—as the opening of a door,—and the patient frequently creeps over the fire; sometimes I have observed the back of the hands, and the fore part of the legs, to assume a peculiar brown colour, from being burnt by a constant approach to the fire; the hands and fingers are apt to be extremely livid and cold.

"The mode of walking is peculiar, being attended by stooping, weakness, and caution.

"The pulse is always frequent, and generally regular. It is earlier, and longer frequent, in tuberculous affection of the abdomen, than of any other cavity. I have known the pulse to be between one hundred and one hundred and twenty, for several years.

"The emaciation in tuberculous disease of the abdomen is uniformly but very slowly progressive. It is accompanied by a state of unvaried debility; and in the later periods of the disease, by some œdema, generally observed more in one leg than the other.

"The other symptoms of this morbid affection are less constant; they are chiefly an augmented appetite for food, copious, pale, alvine evacuations, and pain, and sometimes a perceptible tumour, in some part of the abdomen, especially in the iliac or hypogastric regions. The catamenia simply become scanty, or cease, without undergoing the changes observed in some cases of disorder of the general health.

"There are altogether a peculiar appearance of the countenance; a peculiar mode of walking, and a peculiar attitude and manner in general, all denoting debility and great disease; and if to them be added the peculiar sensibility to cold, and tendency to coldness and lividity of the extreme parts of the body, the very gradual emaciation, and the habitual frequency of the pulse, it is scarcely possible to mistake the nature of this disease; but in practice the diagnosis requires very careful and minute observation." 123.

As for tubercular affections of the encephalon they can only be suspected and distinguished from slow inflammation by observing the concurrent existence of tubercles in other parts of the body. The symptoms of tubercles in the lungs have been so ably described by Bayle, Laennec, and Louis, that our author does not think it necessary to take up the question here. Several cases are detailed by Dr. Hall, illustrating the graphic description of tuberculous affection of the abdominal cavity, which we have fully quoted. These cases do not require any analysis in this place.

Chap X.—This chapter contains some observations on certain affections of the uterus and mamma. The uterus may be affected by disorder of the general health —by a state of exhaustion of the system— by organic disease of some important viscus —and by inflammation of the uterus itself. The morbid conditions which come in under the first head, consist in an impaired state of the catamenial function, supervening, for the most part, gradually—the uterine discharge becoming irregular, generally retarded in its returns, curtailed in its duration, defective in quantity and colour—often ending in complete amenorrhœa. To these symptoms, there is sometimes added painful menstruation, which is much relieved by pediluvia, semicupia, and warm water injections, with opium or hyosciamus.

But our author's chief object in this chapter is to notice some morbid states of the catamenial function, apparently dependant upon an inflammatory affection of the uterus itself, attended with amenorrhœa, dysmenorrhœa, and the ejection of a false membrane from the internal surface of the organ.

"All these cases are attended and denoted by pain. This is frequently constantly present, or at least easily excited by coughing, straining, jumping; it is often felt on voiding the bladder or rectum: it is apt to be augmented in paroxysms, and it is sometimes attended by a sense of bearing down, by frequent calls to make water, or by some degree of tenesmus or uneasy feeling about the rectum; and it is not unfrequently attended by pain at the lowest part of the back, and round the pelvis.

"Amenorrhœa, arising from an inflammatory state of the uterus, will, if we can divest ourselves of the influence of a name, be readily distinguished from the cessation of the catamenia in chlorosis, by the absence of the peculiar appearances of this disorder, and by the pain and other symptoms of inflammation. The mode of accession of this case of amenorrhœa is different from that in chlorosis, being less gradual, and less marked by the gradual changes of colour in the discharge.

"Dismenorrhœa from an inflammatory condition of the uterus is still more common, perhaps, than amenorrhœa. It is sometimes accompanied by great pain and profuse discharges, at each catamenial period, and often proves a cause of sterility. In one instance, the patient became pregnant at length; but the substance of the uterus was diseased, and presented the form of painful tumours, on examination of the abdomen; and, after delivery, a fatal inflammation destroyed the patient. On examination, the uterus was found to be the seat of a diseased structure, in a state of partial suppuration.

"In some instances, the inflamed lining of the uterus has formed a false membrane of coagulable lymph, such as is formed, in some cases, in the trachea, and in the intestines; and this is at length thrown off by painful contractions of the uterus, frequently accompanied or followed by hæmorrhagy. The case resembles abortion. The false membrane has the form of the internal cavity of the uterus, but is readily distinguished, on a careful examination, from an ovum.

"In all these cases, an active application of antiphlogistic remedies is absolutely necessary to relieve the patient, to subdue the inflammation, and to secure the organ from a future state of disease of a still more formidable character. I would particularly enforce this remark, in regard to all cases of dysmenorrhœa, which are too apt to be treated as a mere monthly inconveniency, without sufficient reference to the nature and tendency of the complaint; we ought, on the contrary, to be satisfied with nothing short of totally subduing the disease.

"For the case of inflammation, in which a false membrane is apt to form, judging from analogy, I should imagine that a full course of mercury might cure. I am not aware that it has been tried. But considering the painful character of the affection, and its usual effect in inducing sterility, it appears to me that this remedy deserves to be submitted to the test of experiment.

"Otherwise, I am not aware of any mode of treatment, except that adapted for inflammation and pain, in general; only, I would suggest, that the antiphlogistic measures should not be adopted during the attack merely, but should be continued long afterwards; for the formation of the false membrane is the more immediate effect of inflammation, whilst its detachment and expulsion are more properly the consequence of contraction of the uterus itself." 140.

We have thus given a very full analysis of the first part of our author's work, embracing "the Disorders incident to Female Youth." In a succeeding article, we shall take up the important subject of puerperal diseases. In the mean time, we have given sufficient specimens of the minute and valuable observations of this talented author, to induce the practitioner to possess himself of the original work, which is, in this edition, put into a much more systematic and available form than in Dr. Hall's preceding volumes.

Report of an Inquiry into the Value of Mediate Auscultation, as a Method of Diagnosis in Inflammations of the Pleura, Lungs, and Bronchia.—By William Stack, M. D. Physician to Sir P. Dun's Hospital.

Auscultation is making rapid advances in the sister kingdom—and the value of it, as a means of diagnosis, is not now attempted to be questioned, except in holes and corners, by old drivellers who have gone past the period of learning any thing, or by lazy routinists who will not take the trouble of increasing their knowledge, which, indeed, they think is quite unnecessary. The author of the above extended paper is not, however, inclined to assert that, by means of auscultation and percussion, we can always distinguish between inflammation of the mucous, serous, and parenchymatic structures of the thoracic viscera, in acute inflammation of these parts, and in an early stage, but the case is very different when the disease has been somewhat protracted. Thus, a patient presents himself with dyspnœa which has lasted for several days, having been preceded by pain in some part of the chest. On percussion one side returns a dull sound, but does not appear either dilated or contracted. On examination with the stethoscope, the respiratory murmur is absent all over that side of the chest, with the exception, perhaps, of those parts where the root of the lungs is situated, and a few inches down the spine. There is neither bronchophony (except in the superior parts) nor ægophony.

What is to be the diagnosis? Is the disease pneumonia or pleuritis?

"I say it is impossible to determine, even supposing the minor signs to be present, such, for example, as the communication of the heart's action over the affected side, which some will have to be a sign of the advanced stage of pneumonia, but which may also depend on other causes, such as dilation with hypertrophia of the heart. The disease may be either acute pneumonia or acute pleuritis, or it may be chronic pneumonia or chronic pleuritis.

"It is true that the nature of the sputa may afford us assistance in this case, but it must always be remembered that the appearance of expectoration is more variable in chronic than in acute inflammations; and that both in chronic pneumonia, and chronic pleuritis, it very frequently assumes the form of the expectoration of catarrh." 93.

The following case is adduced in illustration. We shall considerably abridge the narrative.

A man was admitted into hospital on 26th May, who had been seized fourteen days previously with sense of oppression and tightness in the left side of the thorax. He had slight pain in the left side, but not, at that time, so as to impede inspiration, or prevent lying on either side with ease. Latterly he could rest on the left side better than on the right. He was bled at the commencement, and had little or no expectoration—but at present it is abundant and catarrhal.

"Exploration of the chest gave the following result: no dilation or contraction of the affected side; dull sound on percussion over the entire of that side; no respiratory sound whatever on the anterior part, except just at the junction of the clavicle with the sternum when there was bronchial respiration; no ægophony, no bronchophony. On the posterior part there was an indistinct respiratory murmur down the spine to the eighth rib. The alteration of the position of the patient produced no change in the results obtained. On the 17th the respiratory murmur was faintly audible on the anterior of the thorax, on a level with and below the apex of the heart; no ægophony; the sound on percussion less dull than at the superior parts. On the 20th, the auscultatory signs were the same as on the 17th, but the expectoration had been presenting various appearances since his admission; sometimes it was liquid, transparent, ropy, and covered with a frothy surface sometimes more dense, opaque, and inclining to a greenish cast; occasionally (as on this day) approximating to the rusty colour of pneumonic sputa. 21st, Bronchophonia in several places down the spine, along the clavicle and spine of scapula, and those places where it is generally audible in health. The sound, however, not so remarkable as at the healthy side; he now lies on either side, or on his back, with perfect ease. In a few days he left the house, having no complaint, and the respiratory murmur becoming daily more distinct." 94.

This case was treated as one of pleuritis, effusion being supposed to have taken place before he entered the hospital. But the auscultic signs were equally indicative of pneumonia or pleuritis. One of them, indeed, (the return of the respiratory sound at the *inferior part*) seemed rather to point to pneumonia than pleuritis. Dr. S. has not taken into the account the possibility of the disease being bronchitis, because it very rarely happens, though not always, that in this disease the chest returns a dull sound on percussion. An interesting exception to this general rule is related at page 96 of the volume. The bronchial inflammation had been very acute and rapid, producing a state approximating to asphyxia, while the effusion of fluids into the various branches of the bronchia and air-cells rendered the lungs so dense as to communicate the shock of the heart's action to all parts of the chest, as in hepatization, depriving the lung, at the same time, of all respiratory murmur, or sonorous percussion. On dissection, no inflammation whatever was found in the substance of the lungs, but the air-passages were charged with viscid fluid. Of all diagnostic signs in inflammatory affections of the thoracic viscera, Dr. S. depends most on the *colour of the countenance.*

"Each of the three inflammations, I speak of the acute forms, pleuritis, pneumonia, and bronchitis, possesses, when the disease is at all severe, the characteristic of a peculiar colour of the countenance. In pleuritis it is either of a flushed and florid, or of a natural hue. In humid* bronchitis it is of a colour more or less approaching to a blue, according to the severity and extent of the inflammation. In pleuritis the lips are of a florid red; in humid bronchitis they are of a blue colour; the flush of pneumonia is altogether different from either; it is, as it were, made up by an intermixture of the two shades, but quite distinct from each; it is also less remarkable in particular isolated parts than the colour arising from humid bronchitis and pleuritis; in both these the cheeks are often flushed in a circumscribed manner, the lips are always remarkably coloured; but in pneumonia the lips and cheeks are scarcely more suffused than the adjacent parts, and the flush, though sometimes circumscribed, appears more generally diffused. It seems to me not very difficult to account for this variety of colour in these different diseases; in acute bronchitis, especially where it prevails epidemically, the affection is commonly of a generally diffused nature, and extends over a considerable portion of the lungs (at least in this country,

* "I use the term humid for the purpose of showing that these observations apply to that form of bronchitis, (which is by far the most frequent,) in which an increased secretion takes place from the mucous membrane."

although from the clinical records in other places the contrary seems to be the case;) the nature of the morbid change is such as to afford a very considerable obstruction to the transformation of the venous into arterial blood; the consequence is, that blood very little differing from venous is circulating in the arterial system; this easily accounts for the bluish cast of the countenance. In pneumonia the affection is not, in general, so universal, and in but comparatively few instances does it happen that both lungs are engaged; in either case the progress of the complaint is not so rapid as to afford an instantaneous impediment in the affected part to the act of hematosis; but the blood which circulated in the pulmonary artery and veins through the affected part is, up to a certain stage of the disease, partially converted into arterial blood; this is poured into the left side of the heart, and there mingled with the perfectly formed arterial blood coming from the sound portion of the lungs, producing but a slight variation from the colour of true arterial blood. It is obvious, therefore, that except in cases of a violent nature, or where the inflammation occupies a considerable extent of lung, the alteration which the colour of the countenance undergoes must be but slight, and that this alteration is such as would arise from the circulation of blood not bluish, as in the case of bronchitis, but rather of a dull red, or brick colour. In pleuritis, while the disease occupies one side only, scarcely any obstruction is offered to the transformation of venous into arterial blood; for the pulmonary tissue and mucous membrane being unaffected, the process of hematosis will be perfected in all the parts of the lungs which are permeable by the air. If indeed the affection be general over one side, or if the inflammation be so violent that a copious effusion is suddenly produced, then it may happen that the lung will be compressed or folded on itself towards the root, and remain nearly inoperative in that process; but still all the blood which *is* transmitted through this lung will be properly transformed, and so no blood can pass to the left side of the heart but such as possesses the genuine florid colour of arterial blood. If therefore there were no accompanying fever, the countenance would remain, as far as colour is concerned, in a perfectly natural state; but inasmuch as there generally is a considerable degree of concomitant fever, and that too of the angiotenic form, (that is, where the circulating system is chiefly engaged,) it is evident that the capillary system must be injected with a florid blood, and so produce that floridness of countenance which is peculiarly remarkable in cases of violent pleuritis. If both sides are simultaneously affected, a case which rarely occurs, then the obstacle opposed by the pleuritic effusion to the dilatation of both lungs causes a very material obstruction to the transformation of the venous into arterial blood, and blood will pass to the left side of the heart, notwithstanding the compressed state of the lungs, which has not been completely submitted to the action of the atmosphere; the countenance, therefore, will assume an appearance more or less similar to that of pneumonia or bronchitis, according to the severity of the complaint. What I have now said applies to these affections only when in an uncomplicated form; when they are complicated with each other the flush peculiar to each is of course modified by that attendant on the superadded affection; for example, in pleuro-pneumonia, (that is, where inflammation of the parenchyma of the lungs is complicated with pleuritis,) we may expect to find the dusky lurid red of pneumonia assuming the place of the florid cast of pleuritis, because a moderate degree of inflammation of the lung will produce a greater deviation from the natural colour of the countenance, than the same degree of inflammation of the pleura." 101.

The above passage contains interesting observations. In the succeeding pages, Dr. S. enters into a rather too minute inquiry respecting the priority of inflammation in one or other of the tissues above mentioned. We cannot follow him in this investigation, but refer those who are curious on this subject to the volume itself.—*Dub. Hos. Rep. &c.*

Observations on the Danger of Hæmorrhages arising from the Rupture of Varices on the Inferior Extremities. By A. N. Gendien, Editor of the Journal Général de Méd.

Professor Boyer, whose works have so greatly contributed to the advancement of surgery, makes the following remark in relation to varices on the extremities: "one or more varices may be ruptured by the pressure of the accumulated blood, *without occasioning any other inconvenience than a copious hæmorrhagy, which is not even attended with a proportionate debility*, as we have frequently observed."*

An assertion thus positively made by one who ranks so deservedly high in his profession, and whose opinions are referred to as authority in all cases, may, if unfounded, be productive of much mischief, by inducing physicians lightly to regard an accident, which is often dangerous, and may even be productive of fatal consequences, as the following cases will prove.

P. Forestus (lib. xxix.) relates the case of a woman in the eighth month of utero-gestation, who had varices on her extremities; one of them situated near the ankle, ruptured and discharged a large quantity of blood—more than three pounds were lost when syncope was induced. Forestus found her almost in articulo mortis. With the concurrence of a surgeon who attended with him, he applied burnt linen to the ruptured vessel, and thus arrested the hæmorrhage; the woman was restored to life, *ab inferis in vitam revocasse visi*

* Traité des Med. Chirurg. Tome II. p. 248.

sumus; and was happily delivered at the usual period.

A similar case is recorded by L. Sigis Grassius, of a woman whose extremities had long been covered with varices. A vein opened behind the malleolus, and threw out blood in such quantity, that her life was only saved by immediate recourse to surgical assistance. *Ephem. Acad. Nat. Curios.*

In these two instances, the veins were not opened by the ulcerative process, but directly ruptured. A case is related by J. Mays, in which an ulcer formed upon the varix, accompanied with tumefaction of an erysepelatous character; having resisted every mode of treatment, it ultimately perforated the vein, and gave rise to such a profuse hæmorrhage, that the patient lost in a short time, more than two pounds of blood—it was arrested by means of compression with a firm plaster.

It is unnecessary to insist upon the danger which may result from the loss of such large quantities of blood; if there were any doubt on this subject, it would be removed by the following cases.

M. Monfalcon, in the article Varices, in the Dictionnaire des Sciences Médicales, Tom. LVII. p. 12, relates that M. Lombard has seen a hæmorrhage of this nature attended with fatal consequences.

M. N——, 56 years of age, had been frequently troubled with hæmorrhages in his youth, and at a more advanced period, with those of a hæmorrhoidal character. He now carelessly wore a laced stocking, in order to restrain the growth of some enormous varices, so superficially seated that it was difficult to conceive how their parieties could resist the slightest motion. Hæmorrhage in considerable quantity, had on several occasions been the consequence of their rupture, but had always been arrested by the application of pressure.

On the morning of the 10th May, 1807, this gentleman being alone in his apartment, was attacked by a hæmorrhage, which, according to appearances, must have suddenly become very profuse, inasmuch as the blood was traced through three chambers, which he traversed in order to reach the one in which he was found dead. The floor of one large room was entirely covered with blood.

At the session of the Royal Academy in July, M. Amussat presented an anatomical preparation of the varicose leg of a person who died in a few seconds from rupture of one of the enlarged veins. On dissection there was found on the internal and middle part of the left leg, a varicose tumour of the size of an egg. Lower down the saphena presented some dilated points. Behind the malleolus an ulcer was observed, with a small opening in the centre, from which the blood had flowed. Following the course of the saphena, it was remarked, 1st, That the accompanying lymphatics were much enlarged.

2d, That the anastomases with the deep seated veins were very free, and the latter greatly increased in size, with thickened parietes resembling the arteries. When divided, they remained open in the indurated cellular tissue which surrounded them, like the branches of the vena portæ in the liver.

3d, That the valves were almost entirely obliterated. The blood could be made to flow with great facility in a retrograde direction—a circumstance which explains the rapidity of the hæmorrhage.

4th, That the varicose tumour on the internal and middle part of the leg, was not formed by a dilatation of the saphena, but by a small vein, enormously enlarged, and folded upon itself after the manner of the vesiculæ seminales. This vein formed a kind of arch, opening by both extremities into the saphena.

5th, In the part corresponding to the ulcer, there was observed a venous dilatation, which did not depend upon the saphena, but was formed by one of its anastomasing branches, arising from the back of the foot; so that the opening from which the blood had flowed was not seated on the saphena, but upon the dilated portion of the vein just mentioned.

After this communication of M. Amussat, another member of the academy, M. Murat, surgeon to the Hospice de Bicêtre, related a similar case which had fallen under his observation occurring in a female in the eighth month of her pregnancy. This woman had a small varicose ulcer in the vicinity of the ankle; blood had often issued from it, sometimes very profusely, but had always been easily arrested by pressure. On one occasion, the hæmorrhage having returned, she endeavoured in vain to suppress it; a surgeon who was sent for, met with no better success, and when M. Murat arrived, the woman was dead.

It follows from all these facts, that rupture of varices on the extremities, may produce a hæmorrhage very rapidly fatal, and which cannot be suppressed by simple compression of the part, a method which was ineffectually tried in the two cases last mentioned.

Before speaking of the treatment of these hæmorrhages, let us briefly advert to the circumstances which may render them so dangerous.

M. Lifrauc whose mode of operating in these cases by excision is already known to our readers, has observed in those operations, and in amputations of varicose limbs, a circumstance, which goes far to remove the obscurity of this subject. It is, that the blood always flows, and frequently in abundance, from the superior portion of the vein, while its inferior extremity furnishes a very small quantity. In amputations, when the veins are varicose, we are obliged to tie them, in like manner with the arteries, which is not the case when they are in a healthy condition.

We may infer, from these remarks, that in hæmorrhage arising from large varices, the blood comes from the superior part of the vein, and we see at once why an accident which depletes so rapidly the primitive iliacs, with which the saphenæ ultimately unite,

should be productive of such dangerous consequences.

It is not our intention to give in this place the anatomical history of varices, this subject forms an entire chapter in our work on inflammation; we wish, however, to call the attention of the profession to two circumstances pointed out by M. Amussat in the preparation presented by him to the academy. The first is, the dilatation of the small anastomasing vessels which branch off from the enlarged trunk, and unite with it again; and the second, the obliteration of the valve, in varicose veins. It is owing to these morbid changes, that the blood is permitted to flow in a retrograde direction, and that the varicose vessel becomes the point of confluence to the blood from the surrounding deep seated veins, as soon as it finds an exit externally.

In the discussion which arose in the academy, upon the communication of M. Amussat, it was determined, that the best mode of arresting such dangerous hæmorrhages, would be to make compression upon the whole extent of the limb, by means of a bandage and compress fixed upon the varicose vien. This plan would doubtless succeed, but it requires an experienced hand, and a length of time, during which, the loss of blood may be attended with unpleasant consequences. We beg leave to propose another method of undoubted efficacy, and requiring no skill on the part of the operator; as it will allow time for the arrival of a surgeon, by whom a more methodical compression may be substituted, it should be communicated to all who are exposed to accidents of this nature. This plan consists in the application of a simple ligature around the limb above the bleeding orifice, sufficiently tight to suspend the arterial, and consequently the venous circulation.

MAMMA SITUATED ON THE LEFT THIGH.

By M. Robert. Jour. de Physiologie, &c.

Among the anomalies which we so frequently meet with in the organization of the human species, there is perhaps none more curious and more uncommon, than that of a woman suckling her child at a mamma situated on the external part of the thigh, four inches below the great trochanter.

Having been informed, some years since, by the interne of the hospital at Marseilles, M. Rolland, now physician at Ailes, that such a woman resided in his neighbourhood; I expressed a desire to see her, and examine for myself, the particulars of this lusus naturæ.

This woman, Thérèse Ventre, resides at this time at Marseilles, near St. Laureat, is 50 years of age, of a tall and slender form, is descended from a mother who had three mammæ, two on the right, and one on the left breast, and is one of seven children who were brought up indiscriminately upon either of the three mammæ.

Thérèse married in her fifteenth year, and had one child, succeeded by three abortions. Two days after her *accouchment*, she perceived an itching sensation, in a small fleshy excrescence, which she had always considered as an *envie*, and which was situated on the middle and external part of the left thigh; this was followed by the discharge of a whitish fluid in considerable quantity. Disquieted by a circumstance so unusual, Thérèse had recourse to her mother, who soon ascertained the milky character of the discharge, and that the supposed *envie* was a real nipple situated upon a round and elastic body, about the size of a small orange.

To convince her daughter of the reality of this extraordinary occurrence, she applied the child to the nipple, who took it without hesitation, and continued to suck as at the breast, for the space of nine months; when from the abundance of milk in the latter, Thérèse was induced to take a child, belonging to the sculptor Galinier, (a distinguished artist of this city,) and three others in succession; she having constantly a large supply of milk during six years. Her own son was brought up at the mamma on the thigh till he reached his thirty-third month.

This woman assured me, that at the approach of the menses, she perceived the same sensations in this mamma, as in those on the breast, and that it presented all the phenomena of which the latter are ordinarily the seat.

On the 25th of August, 1824, I examined Thérèse for the second time. The nipple on the thigh preserved the size which it had six years ago, notwithstanding that the menses had ceased; it is endued with a marked sensibility when excited, and appears also to be supplied with a great number of lactiferous tubes; the gland has, however, entirely disappeared, leaving no trace of its former existence.

The facts which I have related, are those which I have myself witnessed, or which I have gathered from the subject of the case, whose narration there is the less reason to suspect, as she has always attached a degree of shame to this malformation. Desirous only of truth, I have abstained from any remarks of my own, and have appeared the strict historian of a fact, which may, perhaps, be deemed worthy to be preserved for the curiosity of posterity.

Case of a Fibrous Tumour growing over the transit of the Ninth Dorsal pair of Nerves.

By M. Monod. Bull. de la Soc. Anat.

A man, 63 years of age, of a robust constitution, had always enjoyed good health, notwithstanding the laborious duties to which he was subjected, at first in the army, and afterwards as a labourer in the quarries. In March, 1826, he complained of a slight difficulty in elevating the left leg, which increased gradually; the foot trailed along the ground, and struck against any little inequalities on its

surface; sometime after, lancinating pains were felt in the diseased limb. These symptoms appeared after the same manner, at a somewhat later period, in the right inferior extremity. He laboured under obstinate constipation; the bladder was unaffected.

In the month of July, the patient who, till this period, had continued his ordinary avocations, was obliged to relinquish them altogether. He entered St. Louis, and was put upon the use of vapour baths. After remaining there for several months, he was discharged, unable to stand without the assistance of crutches. The disease from this time, advanced rapidly; voluntary motion in the left leg, became altogether impossible; lancinating pains invaded the lower half of the trunk, and increased in intensity, and convulsions supervened in paroxysms on the left side. The limb during their continuance was strongly extended, and all the muscles agitated by a convulsive trembling. This state lasted several seconds, sometimes half a minute; the severity of the pain occasioned piercing cries, and the paroxysms became more and more frequent. He entered the Bicêtre 15th December, and on the 21st was transferred to the Infirmary. I saw him in the beginning of January, 1827. Extended upon his back, he could neither raise himself, nor sit up in bed when raised; the cramp had now extended to the right leg, which notwithstanding, still performed some feeble motions. The evacuation of fœces was very laborious and painful, and the bladder began with difficulty to expel its contents. Towards the end of January, all voluntary motion was destroyed, the dysury increased, and symptoms of cystitis developed themselves; the hypogastric region became swelled and excessively painful, the urine flowed *par regorgement*, it had a red colour, a strong ammoniacal odour, and was loaded with purulent cellular remains. The motions of cough and respiration occasioned the most acute suffering; the tongue dry and red in the beginning, was covered with a black coat, the spasms rapidly succeeded each other, and the lower half of the trunk was unceasingly traversed by the most atrocious pains. A very rigorous antiphlogistic treatment had entirely failed, and the patient died on the 4th of February.

The body was opened twenty-four hours after death. The contents of the cranium presented no perceptible alteration. A tumour of an oval form was found in the spinal column, on a level with the eighth and ninth dorsal vertebræ, in the cellular tissue which unites the arachnoid membrane, to the pia mater. It was situated on the left side of the medulla, its large extremity being below, and was one inch and three lines in length, and four lines in its greatest diameter. It was divided by two transverse fissures, into three lobules, united by narrow pedicles, so that there appeared at first sight, three distinct tumours. These lobules were rounded, embossed and diminished in size from below upwards. The inferior extremity adhered to the foramen which gives passage to the ninth dorsal pair of nerves, the upper part was continuous with one of the filaments of the anterior left branch of the same nervous pair. The superior fissure was traversed by the dentated ligament; the inferior, by one of the posterior branches of the nerve just mentioned; the other filaments thrown backward by the tumour, were united with it at the foramen, they were in a healthy condition. One of the anterior branches we have just seen was lost in the substance of the tumour, the others applied over its anterior and internal surface, were flattened, transparent, and so nearly obliterated, that they could scarcely be followed to the spinal foramen. I omitted to examine the ganglion and nerve after its exit.

The tumour was of a fibrous structure, was contained in a distinct membranous envelope, particularly visible on the largest of the three lobules. The spinal marrow was slightly pushed to the right, and a little softened about the middle of the tumour. The investing membranes did not present any sensible alteration, with the exception of a slight adhesion towards the inferior extremity of the tumour. The arachnoid cellular tissue was distended with gas. The bladder was much enlarged, and extended three inches above the symphysis; its coat had acquired a considerable thickness; the mucous membrane was of a violet gray colour, and ulcerated in numerous points, particularly in its upper portion; the urethra also presented traces of inflammation; the rectum was of a violet red colour, and its mucous membrane completely destroyed to the extent of an inch above the sphincter.

From the Edinburgh Medical and Surgical Journal.

Recherches Physiologiques, &c. Physiological and Chemical Inquiries on Digestion. By MM. Leuret and Lassaigne. Paris, 1825.

Die Verdauung nach Versuchen, &c. Experiments on Digestion. By Professors Gmelin and Tiedemann of Heidelberg. 1825. Part I.

Recherches, &c. The same Work translated into French. By M. Jourdan. Paris, Part I. 1826, Part II. 1827.

The Heidelberg Professors have not thought it necessary to make any personal researches regarding the muscular action of the stomach, but have simply adopted the conclusions originally drawn by Philip, Brodie, and Broughton, and more recently modified by the experiments of MM. Breschet and Mylne Edwards. According to the results obtained by the two last physiologists, the muscular coat of the stomach, under the influence of the pneumogastric nerves, pushes forward towards the pylorus the portions of food which successively undergo chymification in contact with the villous membrane;—the effect of the division of the pneumogastric nerves in retarding digestion is owing merely to the muscular motions being sus-

pended, by which the outer layers of the food are propelled :—and the usual rapidity of digestion is restored by any suitable irritation applied to the ventricular ends of the divided nerves, more particularly, however, by galvinism.

But MM. Leuret and Lassaigne have resumed and varied the experiment of the division of the pneumogastric nerves; and they state as the result of their inquiries, that the only obvious and necessary effect of the operation is to paralyze the sphincter muscle of the cardiac orifice of the stomach, and that the retardation of digestion is simply owing to the food being expelled into the œsophagus by the action of the stomach. For they found that when five or six inches of each pneumogastric nerve were cut away in the neck of a horse, and the gullet was tied after the animal was fed with oats, digestion went on as rapidly as usual: in eight hours one half of the oats had passed the pylorus, what remained in the stomach was all converted into chyme, and the lacteals were every where distended with a white fluid possessing the physical and chemical properties of chyle. This experiment was frequently repeated, and invariably with similar results.

Professors Tiedemann and Gmelin conceive, from a few experiments on dogs, that the division of the pneumogastric nerves also alters the chemical constitution of the gastric juice, namely, by depriving it of its acidity. This appears too important a fact to be decided by the few trials they have made; and in the mean time it is rendered doubtful by the perfect mode in which, under the same circumstances, digestion was found by the Parisian physiologists to be carried on.

The *Gastric Juice*, which has been made so frequently the subject of inquiry, and with such discordant results, has been examined anew both by Leuret and Lassaigne, and by Tiedemann and Gmelin; and our information as to its properties and agency in digestion has in consequence been rendered much more precise. Under this head the most extensive and valuable researches unquestionably appear to be those of Tiedemann and Gmelin.

MM. Leuret and Lassaigne allege they have invariably found the gastric juice to be acid; they state its component parts to be water, hydrochlorate of ammonia, chloride of sodium, mucous, an animal principle soluble in water, phosphate of lime, *lactic* acid; and they impugn the accuracy of the experiments of Dr. Prout, who, it is well known, was lately led to infer that the free acid evolved during digestion is the hydrochloric.

The Heidelberg physiologists, on the contrary, inform us, that if the contents of the stomach be examined after a long fast, and without any stimulus being applied to its villous membrane, the fluid found in it is a clear, ropy, faintly opaque liquid, which is almost or entirely destitute of acidity. But if any stimulus, even of the simplest kind, is applied to the inside of the stomach, then the fluid secreted is uniformly acid, and the degree of acidity appears to be proportional to the degree of the stimulus. Pure gastric juice they found to be best procured by making animals swallow quartz pebbles after a long fast, and killing them in an hour. It was generally a grayish white, ropy, and decidedly acid. It contained, as procured from the dog and the horse, some mucous, osmazome, and salivary matter, alkaline sulphates and hydrochlorates, the alkali being chiefly soda, phosphate, and muriate of lime, other salts in minute proportion; and the acidity was owing to the *hydrochloric and acetic acids* in the dog, and to these conjoined with the *butyric acid* in the horse. That part of their chemical inquiries which regards the free acids seems to have been conducted with great care; and certain criticisms of Leuret and Lassaigne have given occasion to an appendix consisting of a defence of themselves and of Dr. Prout, which we cannot help thinking is quite satisfactory. As the lactic acid of Leuret and Lassaigne is now acknowledged by Berzelius to be a variety of the acetic, all parties may be understood to be agreed as to the existence of that acid in the gastric juice. The researches of Prout, Children, and Graves, confirmed as they have been so amply by Tiedemann and Gmelin, likewise establish the presence of the hydrochloric acid. The existence of the butyric is more doubtful.

When the secretion of the gastric juice is elicited by its natural stimulus, food of various kinds, it has been remarked by Leuret and Lassaigne, as well as by Tiedemann and Gmelin, that the chymous mass is invariably acid, and that its acidity is owing to the acids mentioned above; and Tiedemann and Gmelin farther maintain as the result of their experiments, that its acidity is greatest when the food is most difficult of digestion. In dogs and cats the greatest acidity was remarked when they were fed with coagulated albumen, fibrin, bones, gristle; it was less when they were fed on starch, gelatin, potatoes, rice; and when they were fed with liquid albumen, the alkalinity of the food was nearly sufficient to neutralize the acidity of the gastric juice. The quantity secreted during digestion seems to be very great; Leuret and Lassaigne having found, that when the gullet of a horse was tied so as to prevent the secretions of the mouth and gullet from entering the stomach, a full meal of oats became completely saturated with juice in four or five hours.

So much with regard to the nature and composition of this fluid. Its power of dissolving the food has likewise been made the subject of experiment by the Parisian and by the Heidelberg physiologists; and they agree in confirming the statements of Spallanzani, Stevens, Gosse, and others, and in contradicting the later results of Montégre, who imagined he found that the gastric juice does not act out of the body, and whose opinion has since regulated that of the French school generally. MM. Leuret and Lassaigne remark-

ed that the fluid procured by long sponges from the stomach of a duck while fasting, when kept upon bread crumbs at a temperature of 88° Fahr. soon divided them into minute particles, and formed with them a homogeneous mass precisely like chyme; and that when flesh was mixed with the gastric juice of the dog, it was quickly softened and lost weight. The observations of Tiedemann and Gmelin are more detailed. The fluid found in the stomach of the dog during the digestion of bones and coagulated albumen was made the subject of experiment, and comparative observations were made with water and with milk. Various kinds of food were tried, such as bread, coagulated albumen, raw flesh, boiled flesh; and in every instance it was observed that the bread was broken down in the course of eight or ten hours into a pap, and the surface of the beef and of the albumen was converted into a pulp, which could be easily scraped off. It is evident that Montégre failed in procuring similar results, because the fluid with which he operated was not gastric juice, secreted in consequence of the application of some stimulus to the stomach, but a mixture of saliva, the mucous of the gullet and the fluid which Tiedemann and Gmelin found in the stomach while empty of food and not stimulated.

The solvent power of the gastric juice, therefore, is now placed beyond all question. It is only the German experimentalists who have thought of trying whether this property is accounted for by the composition of the fluid; and of attempting to accomplish, by means of the simple substances contained in the gastric juice, the same solution or digestion which is effected by the gastric juice itself. Their experiments, however, are not complete. They have remarked, that dilute acetic acid, dilute hydrochloric acid, a weak solution of acetate of ammonia, and a solution of hydrochlorate of ammonia, severally dissolve more or less of most animal substances which are used as articles of food. They have not tried their effects conjunctly as they exist in the gastric juice.

Although these experiments, however, are not satisfactory, no doubt can exist that the gastric juice possesses the power, as a mere chemical agent, of effecting the solution of a great variety of kinds of food. Whether this chemical property is, with the aid of the churning action of the stomach, sufficient for effecting the process of chymification remains now to be considered. The mucous crypts of the stomach evidently pour out an abundant mucous; but it is probable that this only serves for lubricating the stomach and food, and perhaps for diluting it. It is impossible, indeed, to collect the mucous of the stomach, so as to ascertain whether or not it possesses also the power of dissolving vegetable and animal matter; but this certainly appears improbable. The bile has no share, as has been imagined by some physiologists, in converting the food into chyme. According to the late experiments of Brodie and Mayo, and those presently to be mentioned of Leuret and Lassaigne, and of Tiedemann and Gmelin, chymification goes on perfectly in animals fed after the biliary duct has been tied. There is no other apparent agent, therefore, in the process, except the gastric juice and the muscular action of the stomach. It appears to us, however, that the question should have been set at rest by subjecting the food during artificial digestion to a process of churning, equivalent to that to which it is subjected by the stomach, and then comparing the chemical changes which take place with those produced on the principles contained in the food after they have been subjected to natural chymification.

The changes produced by natural chymification have received a little of the regard of MM. Leuret and Lassaigne, and have been studied with great care by Professors Tiedemann and Gmelin. It is not easy to present in moderate compass an outline of the results which they have obtained; but the following summary will be found to contain all that is most material. The animals chosen for these experiments were dogs and horses. Liquid albumen forms under the natural process of digestion a homogeneous fluid, in which the albumen remains quite unaltered; and this sort of chyme passes the pylorus more rapidly than any other. Coagulated albumen is much more slowly dissolved, and the fluid formed possesses the properties of coagulated albumen dissolved in acetic acid. Fibrin and vegetable gluten undergo a similar change. Gelatin is converted into a clear brownish fluid, in which neither gelatin nor albumen can be discovered. White cheese forms an opaque, dirty white fluid, containing much animal matter, which, however, is neither casein, gelatin, nor albumen. Starch is gradually dissolved, and loses its reaction with iodine, being converted into sugar and amidine. The results obtained with compound articles of food, such as milk, beef, bread, and oats, in various states of mixture, were such as the foregoing facts would lead one to anticipate. These need not be particularized here. Bones gave a liquid which contained not only animal matter, but likewise a large quantity of lime. The general result of the whole experiment is, that all the animal principles, except liquid albumen, undergo a material change during their solution in the gastric juice, and that the change generally consists in their being made to approach nearer in nature to albumen. The statement of Dr. Prout, that albumen is never found in the stomach, or higher up than the duodenum, appears to be an error. It is to be regretted that but little attention has been paid by both the Parisian and Heidelberg experimentalists to the mode in which unazotized vegetable substances are animalized, which appears one of the most important and least understood of all the changes effected by the process of digestion. The experiments before us are unsatisfactory, and in some respects even contradictory. For example, it does not seem to

be settled that fecula is animalized at all in the stomach; for, contrary to what has been stated on the authority of Gmelin and Tiedemann, it has been found by Leuret and Lassaigne to be transmitted through the whole alimentary canal unchanged, and not to form any chyle, unless it has been mixed with azotized food. According to the latter, wine and spirituous liquors are acidified during the progress of digestion.

During the chemical changes which digestion effects on the food various gases are disengaged. Chevreul found the gas in the stomach to be composed of carbonic acid, oxigen, azote, and hydrogen. Leuret and Laissaigne have found it to consist, as taken from the dog's stomach, of carbonic acid forty-three per cent. azote thirty-one, carburetted hydrogen twenty, oxigen four, sulphuretted hydrogen two. Tiedemann and Gmelin have also found the last gas in the ox and in the sheep.

The next subject which comes under notice is the change which the chyme undergoes in the intestines. Here it is necessary to set out with an account of the nature and uses of the various fluids which are added to the chyme after it has passed the pylorus. These are the bile, pancreatic juice, and secretion of the intestinal mucous membrane.

We have first then to consider the constitution and uses of the *Bile.* In discussing this subject MM. Leuret and Lassaigne begin by adopting very nearly the analysis made some time ago by Thenard; according to whom it contains resin picromel, and yellow colouring matter as its organic ingredients, and the following salts, phosphate, muriate and sulphate of soda, muriate of potass, phosphates of lime and magnesia, free soda, and a little iron. Since this analysis, cholesterine, the chief principle in biliary calculi, has been detected in bile by Chevreul, its discoverer.

But Professors Tiedemann and Gmelin have analyzed it anew with great care; and the result has been, that many other organic principles have been discovered in it, and that it proves to be the most complex of all the animal fluids. They agree very nearly with Thenard as to the saline ingredients, and also with Chevreul as to the presence of cholesterine, which they appear to have detected about the same time as that chemist, and without being aware of his discovery. But they have found the picromel of Thenard to be a compound substance, consisting of resin of bile and a crystalline principle, which has a very sweet and faintly bitter taste, like liquorice, possesses all the properties of sugar, except that of fermenting, contains azote, resembles very exactly the sugar of gelatin procured by Braconnot on treating isinglass with sulphuric acid,—and is one of the constituents of the bile which has the property of rendering the resin soluble in water. They have allowed it to retain the name of *picromel.* Sugar of bile would have been a more appropriate term.

The next addition they have made to the analysis of the bile is the discovery of a principle resembling the asparagin found by Vauquelin and Robiquel in the asparagus. When pure it is in the form of colourless crystals, which are six-sided prisms, terminated by four or six-sided pyramids. They are soluble in about sixteen parts of temperate water, insoluble in pure alcohol, very soluble in nitric acid, but without undergoing any decomposition, fusible, and they have a peculiar fresh taste. The *Biliary asparagin,* as they have called it, is another substance, which, like picromel, renders the resin soluble in water.

Besides the principles already mentioned, Tiedemann and Gmelin have also found in the bile the mucous of the gall bladder, casein, albumen, gliadine, or that part of gluten which is soluble in alcohol, a little osmazome, oleic acid, margaric acid, acetic acid, and a new acid, the *cholic acid.* They have likewise found that the soda contained in it exists in the state of bicarbonate, that there is also a little ammonia, and that there is no sulphuretted hydrogen in it, as Vogel has supposed. Lastly, they infer that it contains a peculiar colouring matter, because re-agents act on bile in the same way as on the colouring principle of biliary calculi; but they have not been able to separate it.

The *Cholic acid* is procured from the alcoholic extract of bile in the form of acicular crystals. It is distinguished from other acids by a sweet taste. In its properties it resembles the uric, pyro-uric and purpuric acids, but it has a stronger affinity for bases.

On the effects of re-agents on the colouring principle of the bile they have made some interesting observations, from which we shall select, as furnishing the best practical test of the presence of bile, the changes caused by nitric acid. When nitric acid is added in small successive portions to bile of every kind, it causes first a green, then blue, next violet, and lastly a red colouration, which becomes yellow on standing, or on the addition of a large excess of acid.

The bile therefore appears to be an exceedingly complicated fluid. Besides saline ingredients of the inorganic class, it contains mucous, albumen, osmazome, gliadine, casein, picromel, asparagin, acetic acid, oleic acid, margaric acid, cholic acid, resin, and colouring matter.

We shall next proceed to consider what has been done by the rival experimentalists to determine the long agitated question of the *Uses of the bile.* A few years ago Mr. Brodie was led to infer, from some experiments on the effects of tying the excretory duct of the liver in animals, that the chief purpose of the bile is to separate the chyle from the chyme. For he remarked that when the *choledochus* duct was secured with a ligature, and food then given, chymification went on in the stomach as usual, but no chyle could be found in the intestines, or in the lacteals. The lacteals contained a transparent fluid,

which he supposed to be lymph, and the watery part of the chyme.* Mr. Brodie's observations have been confirmed by the subsequent experiments of Mr. Herbert Mayo, who remarks, that when the *choledochus* duct was tied in the cat or dog, and the animal killed at various intervals after eating, "there was no trace whatever of chyle in the lacteal vessels."†

These results are at variance with the experiments both of Leuret and Lassaigne, and of Gmelin and Tiedemann. The former tied the common duct in a dog, and cleared out the intestines by giving it a little castor oil. Twelve hours after the operation they gave it bread and milk with sugar thrice at intervals of six hours; and eight hours after the last meal it was strangled, and examined immediately. The stomach contained an acid pulp; a very soft, whitish, sweet tasted chyme adhered to the villous coat of the duodenum; this matter increased in consistence downwards; and in the great intestines it was firm, but had the same colour, and was nearly destitute of taste or smell. The thoracic duct was distended with a yellowish red, transparent fluid, which coagulated on standing exposed to the air, and yielded the usual proportion of fibrin, albumen, and saline matters.

The experiments of Tiedemann and Gmelin are much more elaborate and precise. They remarked that the animals were attacked with vomiting soon after the operation, then with thirst and aversion to food; on the second or third day the conjunctiva of the eyes became yellow; the stools chalky and very fetid, and the urine yellow and convertible to blue, and then to red, with nitric acid. Some of the animals died; some were killed. Of the latter some had previously recovered from the jaundice, which was owing to a singular phenomenon also noticed by Mr. Brodie in his experiments, the re-establishment of the duct by the effusion of lymph around the tied part, and the subsequent dropping of the ligature. In those in which the biliary duct continued impervious, the colouring matter of the bile was found in the blood, the serous membranes, the cellular tissue, the coats of the arteries and veins, and in the fat. Like Brodie, Mayo, and MM. Leuret and Lassaigne, they observed that chymification went on as perfectly as in a sound animal. In the small intestines they found nearly the same principles as in sound animals, with the exception of those derived from the bile; and in particular they found in the duodenum, and in contact with its membrane, the soft mucous flakes which some physiologists consider, but as our authors imagine erroneously, to be chyle. The contents of the great intestines were likewise, with the exception of the absence of certain biliary principles, the same as in sound animals, but they had an exceedingly fetid and disagreeable odour. The thoracic duct, and the lacteals in animals fed recently before death, always contained an abundant fluid, which was generally of a yellowish colour. It coagulated, like ordinary chyle; the crassamentum acquired the usual red colour; in short, the only difference between it and the chyle seen in a sound animal was, that after the tying of the choledochus duct it was never white. The reason of the difference appears to be, that the white colour is owing to fatty matter, taken up from the food by means of the bile, which possesses the power of dissolving fat, and probably, therefore, aids in effecting its solution in the chyle at the mouths of the lacteals. Mr. Brodie appears to have been misled by the absence of the white colour, which the chyle usually possesses, but which it is well known equally to want in ordinary digestion, if the food does not contain fatty matter. Professors Tiedemann and Gmelin confine the agency of the bile in chylification simply to the accomplishing the solution of the fatty matter.

The question, therefore, comes to be, what are really the purposes served by the bile? This question has been fully considered by the Heidelberg professors. They conceive, in the first place, that by its stimulant properties it excites the flow of the intestinal fluids, which is clearly proved to be the case by the unusual dryness of the feces in jaundiced persons, and in animals whose duct has been tied. In the next place, it probably stimulates the intestinal muscles to action. In the third place, considering the abundance of highly azotized principles it contains, it probably contributes to animalize those articles of food which do not contain azote. Fourthly, they believe it tends to prevent the putrefaction of the food during its course through the intestines, because when it is prevented from flowing into them their contents appear much farther advanced in decay than in the healthy state. Fifthly, as already mentioned, it probably tends to liquefy and render soluble the fatty part of the food. But, lastly, they are disposed to consider it also as an important excretion.

The arguments by which they endeavour to support this opinion, and more particularly to prove that it is supplementary to the function of the lungs, are ingenious, if not conclusive. They first show, from the relative size of the *vena portæ* and hepatic ducts, from the more intimate connexion of the biliary capillaries with those of the *vena portæ*, than with those of the hepatic artery; and, finally, from the experiments of Malpighi, recently confirmed by those of Simon,—that the bile is a secretion from venous, not from arterial blood. They next prove that a great number of the principles of the bile, such as its resin, colouring matter, fatty matter, mucous, and salts, are thrown out of the body with the feces, in the natural state of the biliary sys-

* Journal of Science and the Arts, xiv. 343.
† Medical and Physical Journal for October, 1826.

tem, or by the urine, and into the cellular tissue, when the excretory duct of the liver is obstructed. These principles all contain a large proportion of carbon, and would appear, therefore, to be intended to carry off the excess of that element which is introduced into the system with the vegetable part of the food, and which is not thrown off by the lungs. In the lungs it is thrown off in a state of oxidation; in the liver it is thrown off chiefly in union with hydrogen, as in the form of resin and fatty matter. That the bile is thus intended to assist the lungs in decarbonizing the blood appears, they conceive, from the following facts. The resin of the bile abounds most in herbivorous animals, whose food contains a great disproportion of carbon and hydrogen. But, what is of more importance, the pulmonary and biliary organs are in different tribes of animals, nay, even in different animals of the same species, in a state of *antagonism* to one another. The size of the liver and the quantity of the bile are not proportionate to the quantity of food and frequency of eating; but inversely proportional to the size and perfection of the lungs. Thus, in those warm blooded animals, which have large lungs, and live always in the air, the liver, compared with the body, is proportionally less than in those which live partly in water. The liver is proportionally still larger in reptiles which have lungs with large cells, incapable of rapidly decarbonizing the blood,—and in fishes, which decarbonize the blood but slowly by the gills,—and above all, in molluscous animals, which effect the same change very slowly either by gills or by small imperfectly developed lungs. It is also worthy of remark, that the quantity of venous blood sent through the liver increases as the pulmonary system becomes less perfect. In the mammalia and in birds the *vena portæ* is formed by the veins of the stomach, intestines, spleen, and pancreas; in the tortoise it receives also the veins of the hind-legs, pelvis, tail, and the *vena azygos;* in serpents it receives the right renal, and all the intercostal veins; in fishes it receives the renal veins, and those of the tail and genital organs. Farther, during the hybernation of certain animals of the class mammalia, when the respiration is suspended, and no food is taken, the secretion of bile goes on. Another argument is drawn from the physiology of the fœtus, in which the liver is proportionally a great deal larger than in the adult, and in which the bile is secreted abundantly, as appears from the great increase of the meconium during the latter months of utero-gestation. The last argument is drawn from pathological facts. In pneumonia and phthisis the secretion of the bile, according to the observations of our authors, is increased; in diseases of the heart the liver is enlarged, and in the *morbus cæruleus* the liver retains its fœtal state of disproportion. In hot climates, too, where, in consequence of the greater rarefaction of the air, respiration is less perfectly carried on than in colder climates, a vicarious decarbonization is established by an increased flow of the bile.

The next fluid whose nature should now be considered is the *Pancreatic Juice.* This, however, has been already discussed. We have already mentioned that Leuret and Lassaigne differ materially from Tiedemann and Gmelin as to the composition of the pancreatic fluid. On the whole, we are disposed to adopt the researches of the latter gentlemen,—who find that it contains a very large quantity of highly azotized principles, namely, albumen, casein, osmazome, and a matter which is turned red by chlorine,—and who believe that one of its uses is to aid in animalizing such vegetable food as does not contain azote.

Besides the bile and pancreatic juice, the chyme receives in the intestines an additional admixture of *mucous*, or other secretions from the intestinal villous membrane. Tiedemann and Gmelin remarked, that in animals which had fasted long, the inner surface of the small intestines was covered with a thin layer of firm mucous, tinged faintly yellow with the bile, and that if pebbles or pepper had been swalled recently before death, a considerable quantity of thinner ropy mucous, and an increased quantity of bile had been poured out; and Leuret and Lassaigne farther observed, that, when the villous coat of the duodenum was exposed and cleaned; and then touched with diluted vinegar; the membrane immediately exhaled a clear fluid, and the *choledochus* duct discharged much bile and pancreatic juice. It must, however, be evidently almost impossible to acquire a correct idea of the composition and properties of the intestinal secretion, as it cannot be procured free from bile and pancreatic juice. Tiedemann and Gmelin found that, in animals which had swallowed pebbles fasting, there was in the intestinal contents more albumen than the pancreatic juice could account for; and Leuret and Lassaigne also found that the matter adhering to the intestines is in similar circumstances faintly acid. Both believe that it possesses the power of dissolving the food, and Leuret and Lassaigne even give experiments from which they wish it to be inferred, that the intestinal secretions, when mixed with the bile, form a solvent for the food quite as active as the gastric juice, if not even more energetic. But their experiments are unsatisfactory, because in the way in which the intestinal contents were collected they could not fail to be mingled with gastric juice.

But whatever may be the agent or agents in the process, it is well known that in their course through the intestines the portions of food which escape chymification in the stomach are gradually altered in nature. The more nutritive articles, such as coagulated albumen, fibrin, casein, gelatin, disappear entirely, according to Tiedemann and Gmelin, before they reach the lower end of the ileum, and when any fecula passes the pylorus unaltered it is converted as in the stomach into sugar and amidine. There is, therefore, a

close analogy between the process of chymification as carried on in the stomach, and the changes which are effected in the small intestines.

On account of the great number and the complexity of the fluids which are added to the chyme after it reaches the intestines, it is very difficult to determine what precise changes are effected on the food after chymification. The chief facts determined by our author are, that the acidity of the chyme decreases as it passes downwards, and at length disappears long before it reaches the *cæcum;* that albumen exists abundantly in the duodenum, and decreases rapidly downwards; and that the casein and other highly azotized principles contained in the pancreatic juice also gradually disappear. The disappearance of the acidity of the chyme is partly explained by the admixture of the alkali contained in the bile; the albumen is lost, because it forms an important element of the chyle; and Tiedemann and Gmelin suppose that the other more highly azotized principles go to convert into albumen the unazotized principles in vegetable food,—an idea which derives some support from the fact that herbivorous animals have a larger pancreas than carnivorous animals, and that a corresponding difference exists between the wild and domestic cat, the former of which lives entirely on animal food, and has the least pancreas.

The changes wrought on the food in the intestines take place chiefly in the duodenum and upper part of the jejunum. This is shown by the visible properties of the contents of the intestines, and by chemical analysis, and it is farther proved by the gases evolved in the small intestines being produced, according to Leuret and Lassaigne, chiefly, if not solely, in the upper part of their course. These gases, according to the same experimentalists, consist of carbonic acid, azote, and carburetted hydrogen, and are the result, not as some think, of putrefaction, but of the chemical changes caused by the digestive process.

Tiedemann and Gmelin maintain that it is an error to suppose, as some physiologists, and very recently Magendie, have done, that chyle is formed, and may be seen in the intestines. White flakes may be remarked floating in their contents, and adhering to their inner surface, and these have been believed to be the chyle on the point of being absorbed. They are certainly not formed, as has been imagined, by the action of the bile on the chyme, for no such effect is caused by the bile on the chyme out of the body; and on the whole, it appears that they are really nothing else than flakes of thickened mucus. Leuret and Lassaigne, however, affirm, that all the essential principles of the chyle exist ready formed in the chyme. The serous part of the chyle is well known to be present. The fibrinous particles, they say may also be detected. It is in vain, indeed, to attempt to discover them by chemical analysis; this cannot be done even when chyle is purposely mixed with chyme—the proportion of other principles mixed with them being too great. But if the chyme be attentively examined with the microscope, globules will be found even in the stomach, but much more numerously in the duodenum, which resemble exactly the fibrinous globules of the chyle. That they are in fact nothing else, appears, they think, from their being seen before the microscope to run together and form fine fibrils, and from the absence of such globules in the gastric juice, bile, pancreatic fluid, and intestinal mucus, so that nothing but the food can yield them. If these remarks shall be confirmed, the Parisian physiologists have certainly added an important fact to our knowledge of the process of chylification.

Having thus seen what light the researches of our authors have thrown on the more intimate changes which the food undergoes in its course downwards till it reaches the end of the small intestines, it now remains for us to point out their leading observations on the ulterior processes which are carried on in the cœcum and lower part of the great intestines.

The *Cæcum* is very generally believed to be as it were a subsidiary stomach, in which the portions of the food which escape assimilation in their rapid passage through the small intestines are detained, and undergo digestion. Professors Tiedemann and Gmelin have added several new facts to the arguments formerly adduced in support of this idea. Thus they have found that the intestinal secretions, when excited by the presence of pebbles, though not acid in the lower part of the small intestines, become distinctly so in the cœcum; that its contents after a meal are also acid, and the more strongly so, the more indigestible the food is; and that albumen, which gradually disappears in the contents of the small intestines, reappears often abundantly in those of the cœcum. The other principal ingredients in the contents of that part of the canal are a matter resembling osmazome, a substance which is characterized by being reddened by various acids and metallic salts, and fatty matter, resin of bile, colouring matter of the bile, sometimes too cholesterine.

The changes which the contents of the cœcum undergo in the *Colon* and *Rectum* have not been particularly examined in either of the works before us. They evidently consist, however, chiefly in the indigestible part of the food, biliary resin, colouring matter, fatty matter, and intestinal mucus, forming a mass which becomes more and more consistent as it approaches the aperture by which it is discharged.

We have in the last place to relate the observations which have been made on the *Chyle.*

Both MM. Leuret and Lassaigne, and Professors Gmelin and Tiedemann, agree in all the material parts of the analysis of the chyle, as executed by the late Dr. Marcet. What follows is an analysis of the researches of the German professors. Chyle is now well known

to consist of a serous and a fibrinous part, the latter of which separates like that of the blood by spontaneous coagulation. The firmness of the coagulum seems to depend chiefly on the quantity of fibrin. Chyle hardly coagulates at all before it has passed through the mesenteric glands. After passing through them, the fibrin begins to appear, and it is much more abundant after the addition of the lymph from the spleen, which contains a very large quantity of fibrin. The quantity is considerably lessened in the chyle of digestion; and it is increased in the chyle formed after the ligature of the *ductus choledochus*. It abounds in the lymph from the lower extremities. In like manner the chyle before passing the mesenteric glands contains no red particles; but it does immediately afterwards, and more particularly after it is mixed with the lymph from the spleen, which abounds with them as with fibrin. These particles are also, like the fibrin, very much diminished in the chyle of digestion, and proportionally to the nutritiveness and digestibility of the food. They are increased by tying the choledochus duct. They abound in the lymph of the lower extremities. The chyle frequently contains fatty matter,—very little or none, however, if the animal is fasting, or has fed on food which does not contain fat,—and most when the food is very fatty, when, for example, butter is mixed with it. The fatty matter is not dissolved, but exists merely in a state of minute division and suspension, giving to the chyle its peculiar white colour; for the colour is removed, and the chyle rendered limpid by ether, which carries away the fatty particles. There is no fatty matter in the lymph of the lower extremities; it is much less abundant in the thoracic duct than in the chyle before it passes through the mesenteric glands, and it hardly exists in the chyle at all when the ductus choledochus is tied. The serum of the chyle is very generally alkaline; in two instances only, was it found neutral, namely, in a dog fed on fibrin, and in a sheep fed on oats. Its solid contents differ in the chyle of fasting animals and in that of digestion. In the horse while fasting the solid part of the serum consists on an average of 76.2 per cent of albumen, 6.7 animal matter soluble in water, and 16 animal matter soluble in alcohol; but after digestion of 61 albumen, 3 animal matter soluble in water, 34 animal matter soluble in alcohol, of which twenty parts were fat. Our authors were not able to decide whether the total amount of solid matter in the serum is increased or diminished during digestion.

The inference drawn by Tiedemann and Gmelin from the foregoing facts is, that the fibrin, colouring particles, and albumen of the chyle, are supplied either not at all by the intestinal lacteals, or at least in much less quantity than by the lymph, which is formed by the blood, and that the food supplies chiefly fatty matter, and other principles soluble in alcohol, particularly osmazome. Before they are entitled, however, to form these conclusions unreservedly, it is necessary to establish a preliminary condition, which they have entirely neglected, namely, that the flow of the lymph increases along with the flow of the intestinal chyle during digestion; for if it does not, then the proportional deficiency of albumen and fibrin in the chyle of digestion, when compared with the lymph, is no proof whatever that the former does not supply even more of these principles than the latter to the blood. The inferior proportion may be more than compensated by the great increase in the quantity of fluid.

MM. Leuret and Lassaigne, we must add, have remarked that chyle is taken up from the stomach as well as the intestines. Physiologists, they say, imagined that chylification commenced in the duodenum, because the addition of the bile was considered necessary. But if an animal be examined soon after digestion has begun, true chyle will be found in the lymphatic vessels of the stomach.

On reviewing the outline now given of the result of the competition for the academy's prize, the physiologist cannot fail to perceive that his science has reaped from it a rich harvest of facts and observation. No great discovery indeed has been made. Yet at the same time many interesting novelties have been brought forward, many gaps in former researches filled up, many doubts and obscurities cleared away; and on the whole, it cannot be denied that the physiology of digestion has in consequence received much illumination, and that a theory may now be established where there formerly existed nothing else than a hypothesis. The nature of the saliva has been settled; the composition and solvent power of the gastric juice, so much disputed, are now ascertained; the composition of the bile has been more minutely examined, some of its purposes fixed, and certain conjectures as to other uses disproved; the function of the cœcum has been established on surer grounds than formerly; the more intimate chemical changes which the food undergoes in the course of chymification have been to a certain extent unfolded; and much light has been thrown on the circumstances which regulate the varying nature of the chyle.* The chief points which are still left in doubt are the following. The nature and purposes of the pancreatic juice are still unsettled; the changes which the chyle undergoes in its course till it enters the blood, and the agents which effect those changes still supply an ample field of research; and in regard to the chemical changes of the food as it passes through the alimentary canal, there is still much left to be determined when

* Both the German and the Parisian experimentalists, but particularly the former, have studied the digestion of other tribes of animals besides that of man and the *mammalia*. It is impossible, however, for us to command space enough to notice their observations.

the progress of organic chemistry shall have supplied the physiologist with new modes of investigation.

From the London Medical and Physical Journal.

Case of extensive Fracture of the Skull, with Laceration of the Membranes, and escape of considerable Portion of the Brain, successfully treated. By Mr. J. C. Cox, Member of the Royal College of Surgeons, London, and of the Royal Medical Society of Edinburgh.

Friday, January 6th.—George Selman, aged 20, a healthy young man, of a sallow complexion, was working in a coal-pit, when a heavy stone fell from a height of fourteen or fifteen yards, and struck him down to the ground. He was taken up, bleeding profusely from the head, and was carried home. My assistant, who was near at the time of the accident, saw him very shortly, and sent for me.

Although he was completely stunned by the blow, and at first in a state of complete stupor, yet he soon recovered some degree of consciousness. When I saw him, he was not insensible; his countenance was natural, his pulse firm and steady. He had been bled by my assistant before my arrival.

I found a large portion of the upper and anterior part of the left parietal bone driven in by the blow. The fracture extended across the coronal suture, and a part of the frontal bone was included in the depressed portion. The bones were so fractured by the blow, that, after sawing through a small part with Hey's saw, I was able to elevate the depression, and remove the fractured portions, which measured nearly three inches long by two inches wide, but which were broken into ten pieces. The bleeding from the surface of the brain was very considerable. On raising the depressed bone, there was a gush of venous blood, and an artery of the dura mater threw out its blood vigorously. It was necessary to secure this vessel by a ligature, which was of fine silk, and cut off close to the knot. A considerable quantity of brain, estimated at a table-spoonful, had escaped, and some was still adhering to the hair. The young man retained his consciousness during the operation: he occasionally expressed a feeling of pain, and watched his brother walking in the garden, he being placed opposite the window. It was yet necessary to examine whether there were any spiculæ of bone remaining in the wound, and the finger passed into a frightful cavity in the substance of the brain. The angles of the wound were now approximated to each other by straps of sticking plaster, and the centre was dressed with pledgets of lint. After he was removed from the table into bed, he lay in a very tranquil state; his pupils dilated and contracted readily; there was no moaning or expression of suffering.

Evening.—Pulse ninety, strong; had spoken since I left him. He lay quite tranquil; pupils natural; breathing slow and regular; had made water; expressed great aversion to being disturbed.

Poultice applied to the head. V.S. ad. ℥xxx. Ordered an aperient.

7th, morning.—Has passed a tranquil night; lies very still; he speaks little, but is evidently conscious of what passes around him. The wound looks well; pulse 108.

Ordered a Calomel powder, and a mixture with Salts and Senna every four hours.

Evening.—The medicines have acted on the bowels. Pulse ninety, strong; in other respects the same as the morning.

V.S. ad. ℥xvj. Repeat the mixture.

8th.—Passed a tranquil night, but at about seven o'clock this morning became restless; face flushed; pulse 108, not strong; tongue white; skin hot; he occasionally moans. The wound looked well. He knew me when I addressed him.

℞. Calomel gr. ij.; Pulv. Jalap. gr. viij. fiat. pulv. quartâ quâque horâ sumendus, cum Misturæ Cathartic cyatho ad alvum benè solvendam.

The action of the aperient removed all the unpleasant symptoms. The patient continued going on tranquilly. There was a healthy suppuration established; but, on the fifth day after the accident, a hernia cerebri began to protrude.

The poultices were omitted, and the wound dressed with dry lint, and pressure employed by straps of adhesive plaster.

The protrusion continued for some days to increase, in spite of the means employed, till it was nearly as large as the egg of a turkey, and burst open a considerable portion of the wound which had united.

The pressure was increased by means of a bandage, which was firmly bound over the projecting part.

The patient continued without any other bad symptoms of importance. He occasionally became restless and a little delirious, but an active aperient always relieved him.

At the end of three weeks, the protruded portion was evidently diminished; there was an extremely fetid discharge. The pressure employed by the bandage, &c. produced a decided effect on the tumour: if that were intermitted or diminished from any cause, the protrusion was increased; but perseverance in the system at length completely repressed it. The granulations quickly filled up the wound, and at the end of two months it was perfectly healed; and it is surprising how little mark remains of the severe injury that was sustained. His intellectual powers are not at all impaired; and he grew very fat during the confinement. He is now able to work at his usual employment.

Observations.—The injury sustained in this case was so considerable, that few could have anticipated any other than a fatal result; and the favourable progress of the case is to be attributed partly to the health and vigour of

the patient, and also in part to the employment of active depletion in the early stage.

The occurrence of hernia cerebri after fractures of the skull is a great aggravation of the danger, not only as proving considerable injury to the membranes of the brain, but also as being frequently followed by deep seated abscess.

There can be no doubt, however, that the evils of this accident are best averted by gentle treatment; by taking care to avoid inflammation, by strict antiphlogistic diet and venesection; and at the same time, endeavouring to restrain the tumour by firm pressure. The treatment formerly adopted, of cutting away the protruded portion, employing escharotics, &c. only tends to excite that irritation which it is so important to avert, and does not cure the disease: the protrusion still occurs, and the surgeon is baffled and disappointed. At the same time deep seated inflammation and abscess is a very common consequence of such measures. One other observation suggests itself, which is confirmed by the experience of all practical surgeons,—viz. that the evils arising from such an accident can only be averted by full and active depletion at the very early stage of the case; and the benefits of keeping up a free and regular action on the bowels can be sufficiently appreciated only by those to whom such cases are familiar.

Does not the fact of the intellectual faculties being so little impaired by such extensive injury and loss of cerebral substance, afford some confirmation to the theory of GALL and SPURZHEIM, that the organs by which the intellectual faculties are manifested are double?

From the Medico-Chirurgical Review.

DILATATION OF THE URETHRA.

The treatment of stricture of the urethra by mechanical dilatation is well known and commonly practised, whilst the difficulties which, in certain cases, attend that treatment, have often proved a source of considerable annoyance to surgeons. Any plan which proposes to obviate these inconveniences of course deserves consideration, and for this reason, we shall lay before our readers without further preface or apology, an abstract of a paper on the subject by Baron Dupuytren.

This celebrated surgeon observes that there are two methods of overcoming a stricture in the urethra. The first consists in the introduction of a fine bougie *into* the stricture, which is acted on by the mere mechanical pressure of the instrument. This M. Dupuytren terms the *mechanical dilatation* of the canal, and is the plan in common use. Two or three cases are cited in illustration, but these it is not necessary to notice.

There is, however, another mode of proceeding, namely, by what our author calls the *dilatation vitale*. The instrument is of larger calibre and blunt at the extremity; as before, it is passed into the urethra, but not *into* the stricture. When it has reached this point it is introduced no farther, but kept in this situation for a certain time. That this is not a distinction without difference, it is stated that, frequently when it has been found impossible to pass a fine bougie, a blunt instrument has been introduced into the urethra, and kept anterior to, and in contact with the stricture for eight or ten hours, at the end of which time it has been withdrawn, and the bougie has reached the bladder without difficulty. This, however, seems to savour a little of the post hoc, ergo propter hoc argument, for at the first introduction, the bougie may have been obstructed by spasm of the canal, which, at the end of so many hours, may have subsided quite independently of the presence of the larger instrument. But we shall pass at once to the cases brought forward by M. Dupuytren in support of his practice.

Case 1. Eight or ten years ago, M. Dupuytren was called to M. * * *, a man of property, and of a nervous and extremely susceptible disposition. He was tormented with great difficulty of making water, and M. D. proposed the introduction of bougies into the urethra, but the bare thought of a bougie filled the patient with horror, and it was with the utmost difficulty that he consented.—Scarcely had the instrument entered the urethra before all his apprehensions were renewed, and though M. Dupuytren contrived to get the instrument as far as the stricture, such was the agitation of the patient, that he durst go no further. He accordingly left the bougie in the urethra, with the intention of completing its introduction in the course of a few hours. On his arrival at the expiration of the time, he found that the patient had made water freely, and now the instrument was passed fairly into the stricture without difficulty; in a few hours more it was passed still deeper, and during the day it was introduced into the bladder. In two or three days, a larger bougie was employed, and at the end of a fortnight, the gentleman voided his urine in a good stream, and without either pain or difficulty.

This, we apprehend, was a case of "spasmodic stricture," and we can conceive no method more calculated to allay spasm and irritation than that pursued by M. Dupuytren, to wit, the gradual introduction of the instrument. The plan in question appeared to that able surgeon to be well calculated for patients of a pusillanimous or irritable temperament, as also for those cases where the symptoms are not so urgent as to require an immediate removal of the obstacle to the passage of the urine.

Case 2. Colomb, æt. 36, entered the Hôtel Dieu, Feb. 6th, 1827, with all the symptoms of stricture. The difficulty of making water had commenced seven or eight years ago, and it followed a gleet of ten years standing. *Feb.* 7. A middling sized sound was intro

duced as far as the membranous portion of the urethra, where it was stopped by a very firm stricture, into which it could not be made to enter. Up to this point, a bougie was passed, and left in the urethra, but in the course of an hour it was taken out by the patient. In the evening, an attempt was made to introduce it again, but, in consequence of the excessive spasm of the canal, it could be got no farther than the fossa navicularis, and here it was grasped so firmly that considerable force was necessary to withdraw it. *Feb.* 9. A silver sound was employed with similar want of success. Part of a large sound, rounded at its extremity, was now fixed in the fossa navicularis, and at the end of 24 hours, it was replaced by a middling sized instrument of elastic gum, which was kept in the urethra for twenty days. Three instruments, each larger than the other, were successively introduced, and the patient, on leaving the hospital, could make water freely and in a large stream.

Two more cases are detailed. In both, the strictures were of long standing, and in both, the introduction of instruments up to the strictured portion, and leaving them there, proved effectual.

Sounds or bougies of elastic gum, having the extremities rounded off and blunt, and of a length proportioned to the depth of the obstacle, are best adapted for this mode of dilatation. After some hours, and in the worst cases, days, either the blunt instrument itself can be passed into the bladder, or the urethra is so far enlarged as to permit the passage of a bougie. There are many advantages attending a slow and gradual dilatation of the urethra. The pain is comparatively trifling, and there is no danger of producing those lacerations and false passages, which occasionally follow a more rapid introduction of instruments. But, besides this, there is a continual disposition in the urethra to contract again, and the quicker the dilatation, the quicker, cæteris paribus, will be the contraction. This disposition in the urethra may be kept under by the introduction of a bougie every ten, twelve, fifteen or twenty days, as the case may require. The instrument should be retained in the urethra for some time.

In conclusion, we would just observe, that the above plan deserves a trial in those cases of spasmodic stricture, in which the introduction of an instrument into the bladder is impracticable, or exceedingly difficult. We think that it ought to be employed before the caustic bougie; it is a safer, a milder, and, if effectual, a far preferable mode of treatment.—*Repertoire, Tome* 3.

DIABETES MELLITUS.

[*M. Luroth. Strasburg Hospital.*]

Case. J. B. Canyon, a soldier, aged 40 years, entered the Hospital of the Faculty of Medicine, of Strasburg, on the 27th December, 1824, having been affected with diabetes for three years previously. The cause was unknown; but the progress of the disease was rapid, and the patient was reduced to a state of marasmus. He had no pains in the region of the kidneys, nor could any lesion be discovered by external examination of the abdomen. The urine was copious and sweet—the appetite voracious—the thirst inextinguishable—tongue white and moist—pulse, temperature, and alvine excretions natural. The quantity of urine made each day amounted to upwards of 30 pints. Various remedies were used, without any impression being made on the complaint. The plan of Rollo was then tried. By the third day of this treatment, the quantity of urine was diminished to eight pints per diem, and a most abundant perspiration daily covered the surface. The qualities of the urine became nearly natural. But now the appetite failed, vomitings took place, constipation became obstinate, the thirst was still intense, febrile phenomena were developed, debility rapidly increased, and dyspnœa, with cough, were added to the other symptoms. The patient lingered out till the 10th March, 1825, seventy-two days from his entrance into hospital, and then expired.

Dissection. There was nothing remarkable in the intestinal canal, except a few discoloured patches in the mucous membrane, which, in texture, was sound. There was also a very small ulceration of one of the mucous follicles in the lower portion of ileum, near the valve of the colon. No apparent change in the liver, spleen, pancreas, or kidneys. The vessels of these last were strongly injected. The ureters were dilated, and the urineary bladder was very capacious. Its coats were thickened, and their vessels and nerves strongly developed. In the chest, the morbid phenomena far exceeded the symptoms during life. There was hydrothorax in the left side—hepatization of the left lung, and, in its upper portion, a large cavernous excavation—universal adhesion of the right lung to the side, but its structure sound—hydro-pericardium—aneurismal dilatation of the pulmonary artery, two inches in diameter. There was no lesion in the brain or its membranes. The blood was every where fluid in the vessels, and mixed with air.—Repertoire, No. 3.

On several occasions, in this Journal, we have stated that, of many dissections which we have seen of diabetic patients, not one presented sound lungs. On examining the records of published cases, where dissection was practised, we could scarcely find a single instance where some disease of the lungs was not evident. These facts have long ago led us to believe that diabetes was dependent on pulmonary disease, and, consequently, on some defect in the sanguifactive process. It may be said, indeed, that all these pulmonary diseases occur daily, without producing diabetes. This objection is more specious than solid. The same may be made to

many other pathological conclusions. The same organic disease in the brain will, in one individual, produce epilepsy—in another, apoplexy—in a third, paralysis—in a fourth, insanity, and so on. We cannot account for the variety of effects resulting from the same cause; but if we invariably find disease in the lungs on the examination of diabetic bodies, we may reasonably conclude that such are not mere coincidences, but are to be viewed in the light of cause and effect.

Med. Chir. Review.

HEPATIC TUMOUR.

[*M. Luroth. Strasburg Hospital.*]

Case. Peter Vacher, a shoemaker, aged 52 years, entered the hospital on the 14th January, 1824, having, for six years previously, perceived a tumour in the epigastric region, which, however, gave him but little inconvenience till about six weeks before the above date, when the tumour became painful and tender, accompanied by headach and much perspiration about the head. When examined, a circumscribed tumour was felt in the epigastric region, its site and the jaundiced appearance of the countenance leaving no doubt that it was hepatic. Yet the digestive functions were performed tolerably well —there was appetite—the tongue and pulse were natural—the bowels rather torpid. The patient was troubled with eructations, sleeplessness, headachs. Laxative lavements were prescribed, and ox's gall was given, with the view of proving a substitute for the natural bile. It may readily be supposed that this remedy was of little service. The pain increasing, leeches were applied, followed by poultices. These means procured temporary relief; but the disease made progress, and the patient was worn out by the 4th March—the 50th day of his sojourn in the hospital.

Dissection. Both lobes of the liver were considerably enlarged, the left adhering to the spleen, and both lobes adhering to various surrounding parts, especially to the adjacent intestines. The *right* lobe of the liver was still more enlarged than the *left*, and when cut into, disclosed a cavity containing nearly a pint of a yellowish glairy, but clear fluid, in which several pieces of skinny membranes floated, evidently the debris of hydatid cysts. The cavity itself was lined by a cyst consisting of a dense white shining membrane, intimately adhering to the surrounding structure of the liver. The cavity of this cyst was intersected by partitions of a membranous structure. Around the cyst, in the substance of the liver, was found purulent matter, and also a number of tubercles, some of them softened down, some of them in a state of crudity. There was no other disease in the body.—*Repertoire, No.* 3. *p.* 53-4.

While translating the above, an interesting case occurred in our own practice, of which the following is a brief outline. A gentleman of very social habits, but by no means intemperate, had complained for some years of occasional uneasiness in the epigastrium, with slight symptoms of dyspepsia. Only three months before his death he was in his usual state of health, and presided at a public dinner. He had, however, an irruption on his face, which he was anxious to have removed, and for that purpose, put himself under the care of Mr. Macilwain and Mr. Brookes, of Lambeth. Mr. M. put the patient on a reduced scale of diet, consisting of a considerable proportion of vegetables, and gave some mild alterative and aperient medicines. By these means the eruption entirely disappeared from the face; but now a new train of symptoms occurred. Some fulness appeared just under the ensiform cartilage, attended with pain, and dyspeptic phenomena. For these symptoms leeches were applied, and the usual remedies prescribed. But the fulness quickly increased, and Dr. Cholmely's attendance was had, in addition to that of the two other medical gentlemen. The epigastric swelling, however, made rapid progress, and it was soon discovered that the edge of the liver could be clearly traced extending from one hypochondrium to the other, considerably below the margins of the ribs. The biliary secretion was now considerably deranged—the countenance was sometimes tinged yellow—a sickly sallowness took place —much gastric irritability prevailed—and emaciation advanced. On the 14th July, Dr. Johnson was called in, in addition, and this was about ten weeks from the first appearance of the epigastric swelling. There was now a large prominent tumour in the epigastrium, and the liver could be felt as low as the umbilicus, extending from one side to the other, with hard rounded edges. It was conjectured now that there was some morbid growth, probably of a hydatid, tuberculated, or fungoid nature, independently of the general enlargement of the liver, which might account for the large rounded prominence in the centre. Nothing could, of course, be done, but lessen the gastric irritability by anodynes and effervescing medicines, while motions were procured by aperients. The prominent symptoms were now paroxysms of severe pain along and under the edges of the enlarged liver, which pain was considered by the medical attendants as seated in the bowels, and not in the tumour itself. The unfortunate patient could only lie on his right side —he had constant fever—thickly coated tongue—thirst—loss of all appetite—very morbid secretions from the bowels—and loaded urine. His countenance was indicative of visceral disease. Sir Astly Cooper was now added, in consultation; but, alas! the disease was beyond the reach of art! The patient lingered till the 29th July, when he rather suddenly expired.

Dr. Johnson and Mr. Brookes examined the body at eight o'clock the same evening. There was some serous effusion in the abdomen, which was principally occupied by

an immense liver, or rather tumour of precisely the appearance of brain. Not a particle of the original natural structure of the organ could be discovered. All was a homogeneous encephaloid mass, in which neither vessel nor duct could be traced by the naked eye. This enormous encephaloid growth (for it could hardly be called liver,) had pushed up the diaphragm before it, and reached to the very summit of the thorax on the right side, descending below the umbilicus. Extensive adhesion had glued it to the stomach, transverse arch of the colon, and other contiguous parts. In a groove on its concave surface was found the gall-bladder, containing a thin dark-coloured fluid bearing little resemblance to bile. There was no other disease worth mentioning.

Remarks. We have said that the patient was not *intemperate*, in the common acceptation of the word; but he was a *bon vivant*, though he never carried the indulgences of the table to inebriety. We do not, indeed, believe that this disease was at all dependent on any dietetic irregularity. The rapidity of growth in this tumour, showed a *malignancy* of character very different from common enlargements of the liver. We forgot to mention that, about twelve months before his death, he had been thrown out of a gig, and severely bruised; but, from this accident, he very soon recovered, and enjoyed his usual state of health till within three months of the termination of life. He was of a very philosophic turn of mind, and, a few days before his death, he left commands with his executor that his body should be examined, if his medical attendants expressed any wish to that effect.

Was the eruption on the face any index of the morbid growth going on in the liver? Had the disappearance of this eruption any connexion with the rapid developement of the hepatic disorganization which quickly ensued? These are questions which are easily asked, but not so easily answered.—*Ib.*

Employment of Iodine in the Treatment of Cynanche Parotidœa. (*Rust's Magazin für die gesammte Heilkunde*, 1826.)

Dr. Neumann of Neustadtel in Silesia, has employed the hydriodate of potass with great success as an external application in cynanche parotidœa, which prevailed epidemically in Neustadtel in June 1823. Among the poorer orders who were treated in the ordinary way, the disease was very tedious, and generally ended in suppuration. Among the better ranks, the treatment consisted in the exhibition of an emetic, and the application over the tumour of a plaster composed of eight parts of mercurial ointment and one part of the hydriodate of potass; and the ordinary effect was a radical cure within three or four days. Dr. Neumann adds, that he never observed, in the cases so treated any metastasis to other organs; and he is disposed to impute this to the formation of an erythematic eruption, which always appeared on the first or second day, and remained from eight to twelve days.—The author has annexed a very instructive case illustrating the deleterious effects of this drug when given in too great quantity. It was given to cure enlargement of the cervical glands, which it accomplished very effectually; but the patient was at the same time attacked with violent palpitation in the chest and abdomen, which was relieved only by the horizontal posture, then with great weakness, and tendency to faint, and subsequently with emaciation and general dropsy. The palpitation was so violent and constant as at first to appear connected with organic derangement; but the relief obtained from the horizontal posture, the absence of cough and dyspnœa before the dropsy commenced, and the regularity of the pulse, led Dr. Neumann to conceive that the disorder of the heart was merely functional. Accordingly, although the patient had been ill for a twelvemonth, the irregularity of the heart's action was soon subdued by the employment of digitalis and cherry-laurel water; and the tendency to faint and anxiety at the same time disappeared. The dropsy, however, continued much longer; but at length it slowly receded under the use of the *Arnica* combined with soap.—*Ed. Med. & Surg. Journal.*

From the London Medical and Physical Journal.

Memoranda respecting some Investigations into the Manner in which the Nutrition of the Fœtus is effected, which have recently been made by C. Lee, M. D.

Dr. Lee, from some inquiries in which he has lately been engaged, has been led to conclude that a process of digestion goes on in the upper intestines of the fœtus, similar in kind to that which takes place after birth, and consequently that the nutrition and growth of the fœtus are chiefly, or perhaps entirely, effected in this manner. He has ascertained that the stomach of the fœtus, from three to nine months old, invariably contains a transparent mucous and acid fluid, but never the smallest admixture of albuminous or nutritious matter; while, on the other hand, the upper half of the small intestines always contains a yellowish or orange-coloured pultaceous mass, which, in appearance as well as chemical composition, resembles exactly the chyme of the adult: in a word, that it is nearly pure albumen. The contents of the lower half of the small intestines contain a much smaller proportion of albumen than those of the upper half, and the matters gradually assume more and more the characters of the contents of the large bowels, in proportion as the distance from the valve of the colon diminishes. The meconium is confined exclusively to the great intestine, and is generally possessed of alkaline properties, while the contents of the small intestines

above alluded to are almost invariably acid. The meconium appears further to be merely excrementitious, as no albuminous or other nutritive principle can be detected in it.

It is remarkable that a fluid resembling that contained in the duodenum in appearance and in chemical composition,—in other words, pure albumen,—has likewise been detected in the hepatic duct of the fœtus; from which circumstance, and from the orange-coloured fluid first appearing in the duodenum, near the opening of the common duct, it may be inferred that the liver of the fœtus secretes the nutritious matter, which in no instance has been found wanting in the upper part of the small intestines. It may likewise fairly be concluded that the nutrition of the fœtus is accomplished partly, if not entirely, through the absorption of the albuminous matter so secreted from the intestinal canal, as in the adult. Lacteals, however, have not yet been discovered in the human fœtus, although they have in a fœtal calf of six months.

The small intestines in the fœtus are generally much more red and vascular than the great intestines; but this is particularly striking with regard to the mucous membrane of the duodenum and jejunum, to which the albuminous matter closely adheres, and which affords a strong presumptive proof that they perform some more active and important function. The great size of the liver in the fœtus has long been matter of observation; while the function which it performed has been a source of frequent and unsatisfactory conjecture. It is a remarkable fact, too, that while almost every other organ has been wanting in the various kinds of human monstrosity, no instance has been recorded in which the liver has been absent. Its great size, its large supply of blood, and its invariable presence, accord with the hypothesis above described, which attributes to it the office of separating albumen from the blood during fœtal existence. This idea, especially the fact first mentioned of the stomach containing no nutritious matter, militates against the opinion of some of the latest and ablest physiologists, who have maintained that the nutrition of the fœtus, as of the adult, is effected by the matters received into this viscus.

In conducting the chemical part of these interesting investigations, Dr. Lee has had the able assistance of Dr. Prout.

CASE OF BILIARY CALCULI *discharged through the Abdominal Parietes.* By Dr. Couetoux.

A woman, 50 years of age, had experienced a variety of symptoms, such as acute pain of the back and abdomen, dejections of a bilious and sanguineous matter, irregular fever, &c. She had been afflicted in this manner about a year when Dr. C. saw her for the first time in December, 1825. Besides the above symptoms, the catamenia were suppressed, abdomen hard, round, enlarged, &c.; beneath the umbilicus there was a fistulous opening, from which puriform matter had been discharged. A second tumour situated above the former having increased in size, terminated in abscess, and discharged with the pus three biliary calculi, each weighing from 15 to 18 grs. After a lapse of twenty-four hours, there was a new accession of fever, attended with pain, oppression and tension of the abdomen, followed by the evacuation of three other calculi. From this period, her health gradually improved.

Similar examples are met with, in many collections of medical cases; it is, however, not common to see calculi escape from an opening in the abdomen, at such a distance from the gall bladder. Since Dr. Couëtoux does not say that there was any enlargement of the liver, or that it descended lower than usual, we must either suppose that the gall bladder had acquired a great increase of size, or that there was a fistula extending from it to the opening by which the calculi were discharged.—*Jour. de la Soc. de Méd. de Nantes.*

From the Medico-Chirurgical Review.

ANEURISMAL POUCH IN THE HEART.

In No. 12 of this Journal, page 465-6, we gave some account of Talma's death, and the peculiar disease of the heart under which he laboured—also the case of the late General Kyd, who died of this rare disease, namely, an aneurismal pouch arising from the left ventricle, which ultimately gave way, and caused instant death. M. Berard has recently brought forward two cases of this disease—a third may be found in the Morbid Anatomy of Baillie—and a fourth in the Miscellanea Naturæ Curiosorum. In these cases, as in that of Talma, the fibrous aneurismal pouch arose from the apex of the heart, and was adherent to the pericardium. In a fifth case, reported by Corvisart, the pouch arose from the side of the left ventricle—while, in General Kyd's case, the origin of the pouch was near the basis of the ventricle.

Case. By M. Cruveilheir. M. N. aged 77 years, of excellent constitution, and considerable muscular force, summoned M. C. while in a state of suffocation, that took place while in the warm bath. He presented the following symptoms, viz. purple hue of the face—cold perspiration—extreme oppression—anxiety—expectoration of a spumous, sanguinolent character—hard, full pulse, quick and irregular—in short, he had all the symptoms of a severe paroxysm of asthma. On investigation, it was found that he never had experienced a similar attack before, but that ever since 1809 (the time being then 1819) he had complained of dyspnœa and sense of tightness in the region of the heart, for which he consulted the most eminent physicians of Paris, who considered the disease as spasmodic. The patient was directed to keep in

the vertical posture before a window—to have pediluvia and frictions applied to the lower extremities, and to take some expectorants. By these means, the sense of suffocation soon went off, and, in a few hours, the patient was restored to his ordinary state of health.

From that period, however, M. N. was quite an altered man. He became irritable, timid, pusillanimous, and haunted with the perpetual dread of death in one of these paroxysms of suffocation. This was the predominant idea. During the day, while surrounded by his children and friends, the terror of death was moderate; but the moment he went to bed, the dread of an attack produced, as if by an electric shock, a sense of constriction about the heart, and a strange sensation in the arm pits and hams. The precise nature of these sensations he could not clearly describe. He could dilate the thorax, the lungs seemed free, the pulse was habitually hard and full, occasionally intermitting—capillaries of the face injected—digestive functions perfect. He was still solaced by the idea that his disease was merely asthma; but M. Cruveilheir and another physician justly apprehended that they had a more serious malady to combat—namely, an organic disease of the heart. The stethoscope had not yet been discovered; but the fulness of the pulse repelled the idea of there being any contraction of the ventricular orifices. Still there was no doubt entertained of the existence of some organic lesion of the heart. Various means were employed, in the way of hygiene as well as medicine, but not apparently with much effect. During the eight months that intervened between this attack and his death, the patient had several slight accessions of suffocation, which generally came on in the mornings, with a wheezing respiration, hard and irregular pulse, frothy and sanguineous expectoration. The fresh air, horizontal posture, and pediluvia, were generally sufficient to dissipate these attacks.

Early in July, 1820, M. N. was seized with pulmonary catarrh, which was attended with much oppression of the chest, and sanguinolent expectoration. M. Cruveilheir was called to him on the 12th. Nothing particular was done at that time. On the 15th, he was again summoned in great haste. The gentleman had gone to bed in very good spirits, and slept well all night. In the morning, a severe paroxysm of suffocation came on, and carried him off, his intellectual functions remaining unimpaired till the last.

Dissection. The lungs adhered pretty generally, were crepitant, but considerably infiltrated with frothy serum, and the ultimate branches of the bronchia were red. There were four or five ounces of serum in the left cavity of the thorax. The pericardium adhered to the heart by some filaments, especially on the left side. These being torn through, a small tumour, the size of a walnut, presented itself, standing out from the left ventricle of the heart. It adhered to the pericardium. The parietes of the tumour were very resistent. The left ventricle was hypertrophied. Between two of the columnæ carneæ, there was seen a small opening, which would admit the point of the finger, leading to the tumour or pouch above described. The parietes of this pouch were found to be cartilaginous and osseous, and lined with a fibrinous concretion. There were some calcareous concretions on the mitral valve. The coronary arteries were completely ossified, and the root of the aorta was studded with calcareous spots.

M. Cruveilheir observes that—"here is another instance of asthma *symptomatic* of disease of the heart." It is evident that the patient died of the former, and not of the latter complaint. This is the case in a great number of chronic diseases, where the patient is often cut off by the complication or consequence of the malady, rather than by the original malady itself.

"Is asthma, then, *always* a symptomatic disease? I believe with M. Rostan, that it is generally such in *old people:*—but I admit, with nosographical writers, a primitive idiopathic asthma; and I found this belief on a multitude of cases, in which there was no evidence, during the intervals, of any organic or functional disorder in the circulation or respiration. I may cite the case of a young man, who fell a victim to the fourth paroxysm of asthma. Several large bleedings were practised, and seemed to accelerate, if not cause the death of the patient. On dissection, I could find no trace of alteration of structure in any of the organs in the chest." In a note, M. Cruveilheir remarks that he has seen bleeding relieve, at one time, the paroxysm of asthma—and at other times, even in the same person, it has aggravated all the symptoms. No medicine has appeared to our author so beneficial in the asthmatic paroxysms as large doses of the gum ammoniacum. He thinks that the disease under consideration consists in a spasmodic constriction of the muscular fibres surrounding the various branches of the bronchia—which constriction is sometimes idiopathic—sometimes symptomatic.

In respect to the aneurismal pouch observed in the above, and in a few other cases, the disease is evidently of the same nature as real aneurism in the arteries of the body. It thus fills up a lacuna in the history of aneurism generally, by showing that the heart itself is subject to the disease, in the strict meaning of the word.

INTERESTING CASE OF PARTIAL PARALYTIC AFFECTION, *commencing in the extremities of the Toes and Fingers.*

W. Hicks, æt. 44, of spare habit, a weaver, came into the hospital on the 12th of July, under the care of Dr. Scott, on account of partial paralyses of the hands and feet.

The history of the case, which is very curious, was thus given:—he was first attacked

with numbness in the toes, a general deficiency of sensibility and loss of power afterwards gradually extended over the foot and up the leg, until at length in walking he dragged his limbs along. At this time he had pain in the head, with vertigo, for which he was cupped, and took various medicines, and derived much benefit to the affection of the head, but the partial loss of sensation and power in the feet and legs was much the same. From this period until last Christmas, he continued to pursue his ordinary employment, the legs having become much stronger, although the feet still continued numb, as far as the ankles; he was now attacked with numbness at the extremities of the fingers of each hand, the sense of feeling gradually becoming obtuse to the middle of the metacarpus, above which point sensation was perfect.

The imperfect paralysis also extended in the lower extremities, gradually reaching as high as the knee; he had no pain of the head or vertigo during this period.

When admitted into the hospital, he was in the condition described above, with imperfect sensation, and partial loss of muscular power in the hands, as far as the middle of the back of the hand, and also of the legs as high as the knee. He had no pain of the head, vertigo, or uneasy sensation; his memory and faculties were perfect. He had strabismus, with a very small contracted pupil in each eye, and imperfect vision, especially with the right eye, the power of sight in which was nearly gone. The squinting, he said, came on suddenly, seven years previously; he had no power of moving the left eye outwards, nor the right eye any way, except obliquely, and a little downwards; hence the eyes, not moving in unison, occasioned the strabismus. The man's general health was tolerably good, his bowels somewhat constipated, and he complained of feeling pain occasionally in different parts of the body, especially of the extremities.

Dr. Elliotson, who took charge of the case in the absence of Dr. Scott, was of opinion, that the paralytic affection was referrible to some disease of the brain, and probably owing to the formation of a tumour, which, by its pressure, occasioned the strabismus and imperfect vision; with this view of the case, he directed the head to be shaved, and the ointment of *iodine* to be well rubbed over the scalp twice a day, at the same time prescribing *ten minims of the tincture of iodine* to be taken three times a day.

The iodine was gradually increased to the doses of *fifteen*, *twenty*, and *twenty-five* minims, which latter dose was taken for some time without producing any very sensible effects.

On the 18th of August, when this report was written, the iodine, by the direction of Dr. Scott, had been discontinued for some time, and the patient only takes house medicine occasionally. The paralytic affection of the legs is not at all relieved, whilst in the hands it is increased, now extending as far as the wrist; he feels occasionally a tingling sensation in the arms, but has never felt this in the legs. The vision of the right eye, he says, has greatly improved since his admission; he remains, at present, in Jacob's Ward, at No. 11.—*St. Thomas's Hospital.*

From the London Medical and Physical Journal.

CASE OF HERNIA, *treated at St. Bartholomew's Hospital; with Observations.* By H. EARLE, Esq. F. R. S. &c.

John Harris, ætat. fifty-one, a watchmaker by trade, was admitted into St. Bartholomew's Hospital on Thursday night, Oct. 4th, at twelve, with a large strangulated scrotal hernia. It appeared from his account that he had been subject to hernia for many years, but, not suffering materially from it, he had not made use of any truss, and the rupture always remained unreduced. On the Wednesday morning before his admission, he was seized with a fit of sneezing and coughing, and felt the tumour suddenly enlarged to a great size, accompanied with severe pain. This took place when he was endeavouring to evacuate his bowels, which had not acted from the Tuesday morning. Finding the pain increase, with tenderness of the whole belly and vomiting, he called in a surgeon, who made many unsuccessful attempts to reduce the hernia, and at last sent him to the hospital at midnight on Thursday. He was put into the warm bath, and the taxis slightly employed. I saw him between two and three, and immediately resolved to operate. The following was his state at that time:—the tumour was of great size, and very tense; the testicle could be felt at the lower part, but could not be separated from the tumour, which led to the supposition that the hernia was scrotovaginal. The hernia was very tender to the touch. The abdomen was swollen and very tender, particularly near the ring, which was much distended. His pulse was frequent and very feeble; countenance anxious and sunken; skin clammy; and he had been constantly vomiting for many hours. The bowels had not been relieved from the Tuesday preceding.

On making a long incision through the tumour, the sac, which was much thickened, was found closely adhering to the surface of the intestine, which proved to be the cœcum, with part of the colon. The intestine was much thickened, but not inflamed. On examining the abdominal ring, it was found very large, and free from stricture, the intestine adhered closely all round the inferior margin. Air could be pressed from the tumour upwards in the direction of the ascending colon, and, when the bulk of the tumour was thus a little reduced, a firm elastic-feeling body could be distinguished within the cavity of the sac. This was evidently not a collection of fæces, as it could not be moved. It was obvious that the symptoms of strangulation which existed were not caused by any confinement at the ring, and an accurate examination and careful dissection proved that there

was no additional protrusion of small intestine. This circumstance, coupled with the foreign body which was felt within the cœcum, led me to suppose that a portion of small intestine had been protruded through the valve of the colon, forming a case of introsusception within the hernia. With a view to further reduce the tension of the tumour, I punctured the gut with a small trocar, and drew off a small quantity of dirty coloured fluid and flatus; still the great bulk of the swelling remained but little diminished. The circumstances of the case were very embarrassing, the symptoms urgent, the patient in imminent danger. Nothing presented itself to my consideration but to freely open the bowel which it was impossible to reduce, in consequence of its firm adhesions to the surrounding mass, the nature of which could not be ascertained. The large surface of bowel which had been necessarily exposed, and deprived of all integumental support, rendered it highly probable, even should the passage through the small intestines be restored, that the functions of the cœcum and colon would be suspended, as the intestine would be left to its own spontaneous and insulated efforts to expel its contents, under circumstances most unfavourable, from the adhesions which bound it down on all sides but the front, from the pressure it sustained from the surrounding diseased mass, and from the inflammation which might be expected to follow the operation. From these circumstances alone, an artificial anus was the only alternative which offered; added to which, it appeared evident that the obstruction was connected with the elastic body, which could be felt within the cœcum, in the direction of the valve of the colon. Having proceeded thus far without removing or detecting the cause of the obstruction, it became necessary to investigate farther, and, should it prove to be a case of introsusception, to endeavour, if possible, to return the volvulus through the valve. The passage of the ilium behind the cœcum was rendered impossible, from circumstances which became apparent on dissection: to attempt any thing, therefore, with the upper portion of gut, with a view to extricate it from the valve, was quite impracticable. On maturely considering all these circumstances, and entertaining a full sense of the heavy responsibility which a surgeon incurs in resolving to establish an artificial anus, I determined to make an opening at the lower part, immediately opposite to the most prominent part of the projecting internal tumour.

An incision of an inch and a half long was made through the gut: the coats were greatly thickened, but not inflamed. On cutting through the peritoneal and muscular coats, the mucous coat protruded through the incision to a large extent. On opening this, and introducing my finger, I was able to trace the continuity of the gut upwards through the ring, in the course of the ascending colon. The cavity of the tumour was filled with numerous folds of thickened mucous membrane, to which I could not find any opening, except at one point where a circular opening could be felt, but so small as to lead me to suppose it to be the entrance to the processus vermiformis. As far as I could judge, the opinion I had formed was confirmed by this farther examination. The gentlemen present examined the interior of the gut, and came to the same conclusion.

The patient was now so much exhausted, and the case presented so hopeless an aspect, that I did not consider it right to persevere in any attempts to restore the introsuscepted gut. He was accordingly removed to bed, with a large mass of intestine exposed, having an opening at the lower part, through which some flatus passed. His pulse was exceedingly feeble, countenance pallid, and his extremities cold.

An injection of warm water was ordered to be given; the tumour to be fomented with soft wash leather. Warm port wine to be taken frequently.—℞. Tr. Opii m. xx.

The following is the daily report of his progress:

October 5th, eight A. M.—Slight reaction has taken place; he has not vomited since the operation; complains of a good deal of pain about the abdomen; nothing but flatus has escaped through the wound; he is much oppressed prior to its passing.

Ten P. M.—Vital powers much depressed; pulse exceedingly low; no fæces have yet passed through the wound.—He continues to take warm wine and sago.

October 6th, eight A. M.—During the night, a considerable quantity of feculent matter has passed through the opening in the gut, through which a portion protrudes, like a prolapsus of the anus; he is not entirely free from pain, which he attributes to the accumulation of flatus. Upon removing the wash leather which covered the tumour, a discharge of healthy fæces took place. A piece of oil silk was directed to be placed around the base of the tumour, so as to defend the patient's thighs from the discharge which is continually oozing out, to his great relief.

Ordered arrow root, sago, and strong broth, ad. lib.; with Oj. Vin. rub. per diem.—Tr. Opii p. r. n.

7th.—He states that he feels much relieved; abdomen perfectly soft; he is quite free from pain. A layer of lymph covers the protruded intestine, which in part is becoming organised. Soft feculent matter continues to be discharged through the artificial anus.

Same treatment.

8th.—He continues much in the same state as yesterday. The whole surface of the tumour, excepting a spot about the size of half a crown at its lower part, is covered with healthy granulations. His chief complaint is, that he can get no rest at night; his tongue is rather furred; pulse not indicative of much constitutional irritation; he is free from pain.

Tinct. Opii m. xxx.; Aq. M. pip. ℥iss. o. n. —Same diet.

9th.—Much the same as last report.

10th.—The tumour still continues undiminished in size: its lower part, which it was apprehended would slough, is now covered with granulations; feculent matter of a good yellow colour, is frequently discharged from the wound. Patient much oppressed from the accumulation of flatus, which produces slight griping pains. He has had some difficulty in voiding his urine, which is high coloured. The leather seemed to irritate the granulating surface of the gut.

Let simple dressing be used in its stead, over which place a piece of warm flannel.

11th.—Not quite so well; feels exceedingly low; tongue furred, and complains of slight headach. The opening in the gut remains perfectly free.

Same treatment.

12th.—Has had a restless night; feels much exhausted. The sister states that during the night he was at times delirious. He does not complain of pain, yet his countenance is expressive of great anxiety.

13th.—Much worse; he was again delirious last night; tongue covered with a whitish brown fur; natural warmth of the body much reduced; pulse eighty, and tremulous.

In addition to the wine, &c. he was ordered ℥iv. brandy per diem, with eggs ad libitum.

October 14th.—Great depression of vital energy; his features are contracted; pulse exceedingly weak and irregular; tongue covered with a brown fur; he has hiccough, subsultus tendinum, and his extremities are cold; in short, he has all the symptoms of approaching dissolution. No feculent matter has passed through the artificial anus since yesterday morning. Some warm water was directed to be injected in the interior of the gut, by means of a hydrocele bottle with elastic tube affixed, with the view of removing any hardened fæces that might be accumulated there; nothing, however, escaped. Bottles of warm water to be applied to his feet.

15th.—He is still alive. During the night he was much convulsed; his whole body is covered with a cold perspiration; no pulse could be felt at the wrist. He expired at seven o'clock in the evening.

16th.—*Dissection of the body, sixteen hours after death.*—On opening the abdomen, there was an appearance of very slight peritoneal inflammation on the surface of the intestines principally, at the points of contact of the different convolutions. The abdominal ring was large, and free from any stricture. The ascending colon and the lower part of the ilium were seen passing through it. The ilium was prevented from descending further by a firm old band, which connected it with the peritoneal surface of the bladder. It (the ilium) was rather contracted near the neck of the sac, but readily dilated on pressing in the finger. After removing the integuments, an incision was made into the tumour, towards the septum scroti, and a quantity of sloughy cellular membrane and pus was exposed. The bulk of the tumour on this side was composed of thickened and diseased cellular membrane, which enveloped the spermatic cord and the portion of ilium which was tightly bound down in contact with the surface of the colon. This mass of diseased cellular membrane was above four inches in length, and three in depth. The portion of ilium from the inner edge of the ring to its termination in the colon, was about seven inches in length; on the outer side of the exposed gut, towards the thigh, there was another mass of condensed cellular membrane and fat, five inches in length and above three inches and a half in depth. Behind the gut there was a considerable cavity, containing sloughy cellular membrane and pus. The gut itself, which was exposed in the operation, namely, the cœcum and part of the ascending colon, was inseparably connected with these masses of diseased cellular membrane, which kept it stretched and flattened. On slitting up the gut, on that side which had a peritoneal covering, from the part where it had been opened, large folds of thickened mucous membrane were exposed to view, which were much elevated, and the whole presented a convex surface, instead of any concavity: this appearance was produced by the pressure of the tumour on the scrotal side. The valve of the colon was much thickened and prolonged, conveying the idea of a prolapsed anus. This was the portion which had protruded, during life, through the opening which had been made, which allowed of a ready exit for the contents of the small intestines: immediately below this there was a deep cul de sac, into which the finger had passed after the operation. From the situation and prominence of the valve of the colon, it was apparent that this must have been the aperture which was, at the time of the operation, so small, from the swollen mucous membrane, that I mistook it for the opening of the processus vermiformis. The valve of the colon was so much prolonged and so altered in character, that, even when the whole cœcum and colon were opened, some doubts were entertained whether there was not an introsusception of the ileum. The testicle was situated at the bottom of the tumour; its tunica vaginalis, which was inseparably connected with the hernial sac, was opened at its upper part. The testicle was of its natural size, and healthy. The tunica vaginalis was larger than natural, and had contained a small quantity of fluid, which escaped during operation. The whole tumour, when detached from its connexions, was twenty-five inches in circumference, the greater part of which was composed of diseased cellular membrane, behind and around that part of the colon and cœcum which was not covered by peritoneum. The remaining portion of ileum was healthy, as were all the contents of the abdomen.

On maturely considering all the circumstances of this difficult and truly perplexing case, much interesting matter presents itself

for deliberation. In the first place, to what cause was the symptoms of strangulation to be referred? The history given by the patient was obviously erroneous, and affords another instance, in addition to very many which I have met with, of the impossibility of placing the slightest reliance on the accounts furnished by patients of the existing, compared with the previous state, of the hernia. That no sudden increase of volume could have taken place, dissection satisfactorily proved: the situation in which he particularly stated this increase to have occurred, namely, towards the septum scroti, was the principal seat of inflammation and sloughing in the thickened cellular membrane, and it is probable that, from some cause, inflammatory action was set up in this part, which, as I shall presently endeavour to explain, was the cause of the obstruction. That this inflammatory action existed before the operation, is rendered almost certain by the pain which he always expressed as greatest in this part; and, from its not having been disturbed or at all denuded of its natural coverings by the operation, it is not likely to have occurred subsequently to the operation. That the symptoms of strangulation were not referrible to mere constipation, may be inferred from their yielding after the operation, without the exhibition of any medicine except opium, and further from the great tenderness which existed in the whole tumour before the operation. To what then, it may be asked, are we to refer the symptoms of strangulation, and their subsequent removal? To form any adequate idea of this, requires that the parts should have been accurately inspected, and I fear that words alone will be insufficient to convey any satisfactory explanation.

It is clear that the hernia must have existed very many years; it is equally so that no sudden increase in the portion of protruded gut could have taken place; and that no difficulty to the transmission of fæces existed at the ring, is equally obvious. To what, then, are we to refer the symptoms? The following explanation I venture to offer as the impression on my mind:—The valve of the colon was much prolonged into the cavity of the cœcum, and its aperture was diminished in consequence of the thickening of its parietes. The cœcum and colon were so much extended in consequence of their firm attachments to the diseased cellular membrane and its great volume, that the natural cavity of these viscera was nearly obliterated; the under surface of the bowel being pressed up, so as greatly to diminish the calibre of the gut, and to keep the thickened mucous surfaces nearly in contact. Such being the state of the gut, a very little increased pressure would be sufficient to compress the sides of the elongated valve together, and to form a complete stoppage to the passage of the contents of the small intestines. Inflammation from some cause appears to have taken place in that part of the tumour which pressed most on the ilium and the valve; and thus, I conceive, a mechanical obstacle was afforded to the passage of fæces.

The relief to all the urgent symptoms of vomiting and tension, which followed the operation, and the subsequent free passage of feculent matter, fully justifies this explanation.

It may, perhaps, be a question in the minds of some, whether I was warranted in making the opening into the cœcum? The cessation of all the more urgent symptoms, and the complete establishment of an artificial anus, might be urged in support of the measure,—if success ought ever to be brought forward in justification of a wrong, or even a doubtful measure. But I do not wish to make my stand on such grounds, as I humbly conceive that the principle on which I acted was justifiable; and I am willing, therefore, to court discussion on the subject, as likely to be beneficial in the possible occurrence of any similar case.

The urgent symptoms of strangulation which existed when the patient was admitted into the hospital, and his repeated declaration that it had suddenly increased in volume during the exertion of sneezing and coughing, imperiously called for an operation. Having commenced it, and exposed a large surface of intestine, and not having found any recently protruded portion, or any sufficient cause to explain the nature of the constipation, it became necessary to investigate more narrowly that portion which was exposed, and this led to the supposition of an introsusception through the valve of the colon; a supposition which was strengthened by the examination after the opening had been made, and which was not wholly disproved by the complete exposure of the parts after death.

Supposing such an introsusception to have existed, the opening of the bowel, and the establishment of an artificial anus, was the only plan of treatment which afforded even the remotest shadow of a successful issue, under all the circumstances which have been explained in the account of the operation. To have left the patient without making this further effort would not have been justifiable, and would have been a total abandonment of the case. The adoption of this measure unquestionably relieved the more pressing symptoms, and prolonged the patient's existence.

The features presented by this case were altogether new. The situation in which I was placed was difficult and perplexing. The motives which influenced my practice I have endeavoured to explain: at the same time, I wish to express my desire for information from those who may have met with any similar cases, and my openness to conviction should any reasonable objections be raised to the line of conduct which I pursued.

FATAL CASE OF LITHOTOMY.

J. S. a countryman, æt. 57, entered Guy's, July 14th, under Mr. Key, with symptoms of stone, of considerable standing. A sound

was passed, and a calculus readily detected; his health had lately become disturbed, but his appearance, on the whole, was good. On the 24th, Mr. Key operated with the knife and straight staff; an artery, apparently that of the bulb, being divided, was secured by ligatures, and a stone, about the size of a halfpenny, extracted without difficulty. 26th. Much uneasiness about the stomach and bowels, which was attributed to flatulence, as the patient had suffered from this previously. Castor oil was given, and copious motions obtained. 27th. Abdomen very tympanitic —frequent eructations—pain and uneasiness of the bowels—respiration hurried—pulse moderate, but intermitting at every fifth or sixth beat. Has passed offensive fluid motions, and vomited once, the matters being mixed with much bile. *Hydr. c. cretâ, gr.* iij. *Conf. Opii, gr.* v. *4tis horis.* 28th. Abdomen less distended—purging—countenance anxious—hiccup. *Leeches to the abdomen—medicines to be continued.* 30th. Yesterday morning, hæmorrhage, to six or eight ounces, took place from the wound, and was stopped by pressure; but in a few hours, a second small bleeding took place. In the evening he rallied a little, but this morning the bowels are loose—the pulse feeble—skin cold. *Amm. subcarb. gr.* v. *Camph. gr.* iij. *Opii, gr.* j. *statim.* He continued, however, to sink, and died in the evening of August 1st.

Dissection. No inflammation of the peritoneum, or cellular membrane posterior to the bladder. The viscera have an ecchymosed appearance, and the cellular tissue is lax, and readily torn. Muscular substance of the left ventricle considerably thickened, with here and there deposits of a yellow colour; loose edges of the mitral valve converted into a hard ligamentous substance. Mucous membrane of the stomach and bowels rather vascular, as was that of the bladder; cortical portion of the kidneys mottled and easily broken down.

Remarks. It is abundantly evident that this patient died of the shock given to the constitution by the operation, somewhat aided perhaps, by the subsequent hæmorrhage, small in quantity though it was. The symptoms throughout were not those of inflammation, but of depression, and it may admit of doubt whether support to the system might not have been substituted, with advantage, for the leeches which were employed. We have one remark to make upon the intermissions of the pulse. We are confident that this is not so untoward a symptom as some imagine, for we have again and again seen the pulse intermit after operations, and the patient do remarkably well notwithstanding. It may certainly depend at times upon the organic disease of the heart, but in very many cases we are sure it does no such thing. As the cause of death after lithotomy is a question both of great interest and importance to the surgeon, we shall here introduce a case which occurred some short time ago at St. George's Hospital.

Case. T. Hollamby, æt. 65, a stout hale looking countryman, entered St. George's under Mr. Brodie, May 9th, 1827, with all the symptoms of calculus in the bladder, on sounding which the stone was readily discovered. He had first begun to suffer from the pain in making water, &c. about a twelvemonth ago, and was affected with an old rupture on the right side, and hydrocele to boot. On the 31st, the lateral operation was performed. The perineum was exceedingly deep, the stone small and impacted behind the prostate, so that considerable difficulty was experienced in its extraction. Next day he was pretty comfortable, but on the evening of the 2nd June he became restless and anxious, and the pulse got frequent. *Haust. sennæ,* ʒij. *statim. H. Salin. Vin. Ant. Tart.* ℥ xx—*6tis Horis.* On the 3d, the belly was rather timid and tender on pressure—the pulse quick, and intermitting about every 8th or 10th beat. The bowels had been open. 4th. Much the same—manner quick and anxious—"beef-steak tongue." 3rd. Delirious last night, and rather light-headed to-day—pain on pressing the abdomen greater—pain in the right hand and wrist, with occasionally a degree of tremor over the body; pulse quick and intermitting—tongue dry and furred—urine to-day does not flow so freely from the wound. The finger was now passed up the rectum as high as it would reach, whilst into the wound in perineo a probe-pointed bistoury, having a sliding sharp-pointed blade concealed in it, was introduced. When the probe-end had reached the cellular membrane at the neck of the bladder, the sharp point was pushed forwards, and the part laid open into the rectum, by cutting upon the finger in the gut. This was intended to give a free discharge to any matter which might have formed in the vicinity of the bladder, a circumstance not uncommon in patients with a deep perineum. The posterior part of the scrotum being swollen, an incision was made into it, and vent given to some matter in the cellular membrane. An opening which had been made yesterday, more anteriorly, was next enlarged, but here the cellular membrane contained not pus, but serum. Some vessels were divided, and easily secured. 6th. The patient had not rallied since the operation, and at five o'clock this morning, he died. The urine had always flowed freely from the wound, except on the 5th, as has been mentioned.

Dissection. In the cellular membrane between the prostate and rectum, and towards the left side was a pouch, the size of an egg, containing grumous and putrid blood, the cellular texture in the neighbourhood being in a sloughy state. A little below this sac was the opening into the rectum, in which there was also some putrid blood. The cut in the prostate was rather small, the gland not being by any means divided across. Nothing farther of any consequence was observed about the body.

Remarks. There is a great similarity be-

tween this case and the preceding, the lodgment of blood in the cellular tissue around the prostate constituting the only difference. Whether the symptoms in the latter case were mainly referrible to this cause, is, we imagine, problematical, for they bore a very close resemblance indeed to those which occasionally supervene on the greater operations, and are commonly referred to the shock given to the system. The incision of the prostate was small; this we know is recommended by high authority in the profession, for by a small incision, it is said, we in a great measure avoid hæmorrhage. It may be so; but if the cut in the prostate be confined, so must be that in the cellular membrane immediately behind it, and this we should humbly conceive, would rather prevent the free escape, and, by consequence, favour the extravasation of urine or blood as the case may be.—*Med. Chir. Review.*

SIMPLE CHRONIC ENLARGEMENT OF THE TESTICLE.

We are confident that many testicles are extirpated in this country, and more especially on the continent, for that affection termed by Sir A. Cooper, "chronic enlargement," which is entirely under the influence of mercury. The following case shows the powers of this mineral over the disease.

C. S. æt. 21, entered Guy's Hospital, under Mr. Key, on the 20th June, with the left testicle six times as large as natural. The enlargement was flattened and very hard at the sides, not so firm in front, where the skin, which was not at all discoloured, had become adherent to it. The epididymis was enlarged and hardened, as also was the cord. There was a throbbing pain in the part, and in the left thigh. He stated that he had been affected with a purulent discharge from the urethra for several weeks, that, during this time, the swelling had commenced, and had gone on increasing, in spite of leeches, up to his admission. He was cupped, and took a saline draught with tartar emetic. Next day he was put upon calomel and opium. In the course of ten days, ptyalism supervened, and on the 9th July, little more than three weeks from the time of his entrance into hospital, there remained only a little hardness of the cord and epididymis.—*Ibid.*

STRANGULATED HERNIA IN THE DIAPHRAGM.

N. G., aged 24, an officer on half pay, had received, in 1815, a wound from a lance under the eighth rib of the left side, and had ever since complained occasionally of pain at the lower part of the chest of the same side, connecting the pain with his old wound. During the carnival of 1819 he had been guilty of imprudent excesses; and having exposed himself to cold after being heated at a ball, on the night between the 25th and 26th of February, he felt an acute pain in the usual place. This continued to augment considerably during six days, and on the 4th of March he went into the Military Hospital at Metz in the following condition:—severe pain over all the abdomen, but particularly in the seat of the wound; obstinate constipation; belly swollen and tense; sickness and disposition to vomit; respiration difficult, interrupted, and laborious; pulse small, oppressed, and hard; face livid, expressive of the most intense suffering. *Thirteen leeches to the abdomen; purgative injections.* On the 5th, these were returned without any feculent matter, being mixed merely with some mucous substances: pain increased, and the anxiety is extreme. *Calomel gr. vj.—purgative injections.* No alteration on the 6th. Died on the 7th, after the most horrible sufferings.

"*Dissection*—thirty-six hours after death. On opening the abdomen the whole intestinal mass was found enormously distended. The transverse colon had acquired the size of a loaded stomach; the angle formed at its descending portion passed through an opening in the left side of the diaphragm, about an inch in diameter, and was found in the thorax. The portion introduced and strangled by the diaphragm was about the size of the fist; completely gangrenous; of a grayish black colour, and so softened that it could hardly be touched without being torn, and letting its feculent contents escape. The base of the strangulated part adhered to the opening of the diaphragm by strong fibro-cellular bands. The descending and iliac portions of the colon, as well as the rectum, were greatly reduced in diameter, contracted here and there, and entirely empty, without any traces of inflammation." "The left cavity of the thorax was filled with fœtid gas, and a thick grayish liquid. The left lung was contracted upwards, reduced to a very small bulk, and applied to the vertebral column."—(*Journal des Progrès des Sciences Médicales, &c.*)

On looking over the Repository for 1819, we notice a case in many respects resembling this. The subject was a soldier, also wounded by a similar weapon, and probably on the same occasion. The viscus strangulated, however, was the *stomach*, through a preternatural orifice in the diaphragm caused by the wound.—*Lon. Med. & Phys. Journal.*

CASE OF A MOST ENORMOUS OSTEO-SARCOMATOUS TUMOUR OF THE ILIUM AND FEMUR.

Arising from and covering the whole of the left os ilium, the ascending ramus and tuberosity of the ischium, adhering to the symphisis pubis, and the edges of the thyroid foramen, and involving the two superior thirds of the thigh bone, is an osseous growth of most prodigious size, which measures 24 inches in circumference. This tumour projects most con-

siderably from the ilium, where it forms a tumour which is attended with so much deformity as to arrest the attention of every eye. The surface of the disease is extremely irregular, forming at several places knots of various sizes: it is not completely composed of bony matter; at several points it is soft, its structure being apparently interspersed with fleshy materials. The situation of the trochanters is well marked, as they seem to be lengthened out by osseous deposition; the motions of the hip joint are entirely lost; the articulation is immovably fixed, and is preserved in a semiflexed state. The man is scarcely able to move, lying generally on a bed with his body prone. He experiences constant and severe pains, to alleviate which he is obliged to be constantly under the influence of narcotics. The tumour, from passing so far backwards, obstructs the discharge of the fæces; his general health has suffered much; he is weak and emaciated.

The disease commenced thirty-eight years ago after the receipt of a kick on the ilium from a horse; this was followed by a small hard swelling, which nine years ago began sensibly to increase. During the last four years it has enlarged with astonishing and alarming rapidity.

This enormous tumour, the largest of the kind we recollect ever to have seen, has all the characters and appearance of the osteo-sarcomatous enlargement. The case is one of a melancholy and hopeless nature, and palliative remedies, with a view of relieving his sufferings, were all that Mr. Wardrop had it in his power to recommend.—*Lancet.*

EXTRAVASATION OF URINE *into the Corpus Spongiosum and Corpora Cavernosa Penis, producing Mortification of those Parts, and the Death of the Patient. Treated at St. George's Hospital,* by Mr. Jeffreys.

In the more ordinary cases of extravasation of urine, the rupture of the urethra takes place between the bulb and the bladder, and the urine is forced into the cellular membrane surrounding that part of the canal. The symptoms produced by this accident are of a most formidable description, but, by prompt and skilful management, the life of the patient may frequently be saved. Sometimes the breach takes place in the anterior part of the urethra, and the urine escapes into the corpus spongiosum; more rarely it gets also into the cells of the corpora cavernosa: in both cases mortification of the parts is sure to follow, and the patient seldom or never recovers. The subjoined case affords an example of this accident, and fully illustrates the uncontrollable ravages produced by urine, when effused into the cells of the corpora cavernosa and corpus spongiosum.

William Willis, forty years of age, was admitted into St, George's Hospital, Friday, April 20th, 1827, with swelling and mortification of the penis, the consequence of an extravasation of urine; of which he gave the following history:—In the summer of 1826, he first observed that he had a difficulty in making water, and that it came away in a smaller stream than formerly, and at more frequent intervals. Towards Christmas these symptoms became more severe, and were accompanied by a gleety discharge, and at times he could only void his urine in drops, with much pain and straining. Latterly he had been subject to attacks of fever, with rigours, &c. The last of these had occurred about eight days ago, at which time there came on a constant dribbling of the urine, with swelling, pain, and inflammation of the penis. These symptoms got daily worse, and on Wednesday (two days previous to his admission) a small black spot appeared on the glans penis, near to the frœnum. This had spread with great rapidity, and now occupied more than two-thirds of the glans penis, and a considerable portion of the under part of the prepuce and corpus spongiosum. The penis, anterior to the scrotum, was prodigiously swollen, and the integuments covering it were of a deep oranged colour, and much distended. He complained of great pain, and his urine dribbled away incessantly; but he said there had been no complete stoppage. He had a pale anxious countenance, a brown furred tongue, and a good deal of fever. The mischief appeared to be confined to the anterior part of the penis, the scrotum and perineum being entirely devoid of swelling and pain; and there could be no doubt, from the condition and appearance of the parts, that a breach had been effected in the urethra, a a little way behind its termination in the glans penis.

With the approbation of Mr. Brodie and Mr. Rose, who happened to be in the hospital, I made an incision along the left side of the penis, where a strong sensation of fluctuation led to the expectation of finding a urinary abscess, and carried it through the ligamentous theca of the corpus cavernosum; the cellular membrane was in a state of slough, and loaded with urine; and the internal structure of the corpus cavernosum was of a dark colour, nearly resembling its natural appearance; but no distinct abscess was met with. Another incision was then carried through the mortified portion of the prepuce and corpus spongiosum, nearly to the scrotum, by which the urethra, also in a state of sphacelus, was exposed; and an attempt was made to pass a flexible gum catheter into the bladder; but neither that nor any other instrument could be got further than the membranous part of the urethra. A third incision was therefore made through the perineum into that portion of the canal, in order that a free and easy passage might be given for the discharge of the urine from the bladder.

The penis was enveloped in a large stale-beer poultice; and he was directed to take immediately ten grains of the Dover's powder, and afterwards, at intervals of four hours, a saline draught, containing half a

drachm of the Sulphate of Magnesia, and three grains of the Pulv. Ipecac. comp. Beef-tea and arrow-root to be taken frequently.

In the evening, he was in all respects much relieved. He had enjoyed some refreshing sleep; had voided his urine very freely through the wound in the perineum, a small portion of it having escaped each time by the sloughy opening in the corpus spongiosum, and he complained less of pain in the parts. Pulse ninety-six; tongue dry in the centre.

He slept well in the night, and the next day (April 21st,) the pain and swelling of the penis were considerably reduced; he made water freely by the perineum, and said he felt much more comfortable. Not having had any stool, he took an ounce of Castor-oil early in the morning, which procured one plentiful evacuation; after which he was allowed four ounces of port-wine in the day; and was ordered the following draught every four hours.

℞. Decoct. Cinchon., Mist. Camph. āā ʒ vj.; Tinct. Opii gtt. v. M.

In the afternoon, he had two more purging stools from the oil.

April 22d.—Had slept in the night, but was occasionally delirious. He was more heated and feverish; had a dry, furred tongue, with much thirst; and his pulse was 100 in the minute. The sloughs were beginning to separate from the integuments at the under part of the penis.

He was ordered to omit the wine and bark draught, and to take Ol. Ricini ℥ ss.; and afterwards three spoonsful of the following mixture every six hours:—℞. Mist. Camph., Liq. Ammon. Acet. āā ℥ iv.; Vin. Antimon. Tart. ʒij. M.

23d.—Had been light headed in the early part of the night, but his bowels had acted freely, and he was not so feverish. The whole of the glans penis was in a state of mortification, with the exception of a small narrow portion of the corona glandis, about a line in width: at this part a line of separation had begun, and the sloughs at the under part of the penis were more loose.

24th.—A light erysipelatous redness had appeared about the perineum and the inside of the thighs; his pulse was not so strong, and he seemed to be more weak and languid.

He was ordered some porter, and the following draught:—℞. Infusi Rosæ ℥ jss.; Tinct. Cinch. comp. ʒ j.; Magn. Sulph. ʒ ss.; Syrupi ʒss. M. fiat haustus ter in die sumendus.

25th.—The separation of the mortified parts from the integuments was completed, leaving the latter in a sound and healthy state, but entirely detached from the corpora cavernosa and corpus spongiosum, which were in a complete state of gangrene and slough throughout their whole extent.

On the 26th the erysipelas had spread to a small extent over the left buttock, upon which a few slight vesications had formed. The mortification of the corpora cavernosa appeared to have reached to each crus penis. He was much weaker; had a pale clammy countenance; tongue dried and furred; pulse 120.

Porter, wine, arrow-root, &c. were given at short intervals; and he was directed to take two grains of the Sulphate of Quinine every four hours.

On the 27th, he was much in the same state, and his skin covered with a profuse cold perspiration.

On the 28th, the erysipelas had nearly disappeared from the nates, and was spreading, of a pale colour, and without vesications, over the groins. The mortified corpora cavernosa and corpus spongiosum were entirely separated from the arch of the pubes and the scrotum, but adhered firmly to the parts below. A small portion of urine oozed out over the front of the scrotum every time he made water, but the greater proportion was voided freely in a stream by the opening in the perineum.

On the morning of the 29th, he died.

Dissection.—The corpora cavernosa, quite down to their origin from the ischia, and the corpus spongiosum, includimg the bulb, were completely black and mortified: no vestige of their natural structure remained. The coats of the bladder were more than half an inch thick; its internal coat, which was much corrugated, was of a dark colour, and covered with patches of coagulable lymph, closely adhering to its surface. The Urethra had been cut into at the membranous part, from whence to the bladder it was quite pervious. Upon its inner surface were patches of coagulable lymph, like those in the bladder.

From the Lancet.

On the part performed by the Sympathetics in the Functions of the Senses. By Professor Tiedemann.*

By the dissections of modern anatomists, particularly those of Bock, Hirzel, Jacobson, and Cloquet, the sympathetic nerve has been found to send filaments of communication to most of the cerebral nerves, and directly or indirectly to all the senses. The eye possesses the ciliary ganglion, which is generally in connexion with the first branch of the fifth and third pairs, and not unfrequently with the sixth. Besides these, there are usually some filaments extending directly from the ganglion in the carotid canal to the ciliary ganglion, or in communication with it through the medium of the sixth. In this manner the ciliary ganglion is in direct connexion with the sympathetic, and is regarded by some anatomists, among whom Professor Tiedemann may be mentioned, as a part of this nerve.

The organ of hearing is connected with the sympathetic by several twigs. It receives branches from the ganglion of the glossopha-

* Tiedemann's and Treviranus's Zeitschrift fur Physiologie. Vol. I. p. 2.

ryngeal nerve, the spheno-palatine ganglion, and the superior cervical ganglion. These twigs unite in the tympanum, and form a plexus, from which others are given off to be distributed to the membranes covering the finestræ rotunda and ovalis, and to the Eustachian tube. In addition to these, the tensor and laxator tympani and the stapedius, receive minute filaments from the chorda tympani, which, according to Cloquet and Hirzel, is a branch of the spheno-palatine ganglion, and not of the portio dura.

The organ of smell receives very numerous and important nerves from the spheno-palatine ganglion, which, on account of the close communication between it and the sympathetic, may be regarded as a part of this latter nerve. These nerves accompany the posterior nasal artery to the membrane lining the septum and the conchæ. A twig from these nerves descends on the side of the septum into the canal behind the incisor teeth, and forms a small ganglion (ganglion incisivum,) from which filaments are distributed to the mucous membrane of the palate.

Lastly, the tongue is connected with the sympathetic, partly by the branches which surround the lingual artery, and partly by the chorda tympani, which is either joined to the gustatory branch of the fifth pair, or in close apposition to it.

From this connexion which exists between the sympathetic and the nerves supplying the organs of senses, professor Tiedemann has drawn the following conclusions:—

1. That the sympathetic performs a considerable part in the functions of the senses, keeping these organs in their proper condition by the influence which it exercises on the process of nutrition.

2. That by its influence the secretion of the media is probably effected, through which the action of external objects on the nerves of the senses is effected.

3. That on this nerve the automatic motions in the organs of the senses depend, which regulate the force of the action of external objects on the nerves of these parts.

Prof. Tiedemann then relates some of the most important sympathies between the organs of senses and the principal vital organs, accounting at the same time for their occurrence, by reference to the connexion which exists between their different nerves.

Sympathy of the Eyes with each other, and the principal Vital Organs.

We observe in the eyes several sympathetic appearances, both between the different structures of the same eye, and between both eyes, as well as between those organs and parts remote from them. As far as concerns the sympathy between the various structures of the eye, we know that the globe is very intimately connected with the secretory organs in its vicinity and the eyelids. If the eye be long exposed to the action of strong light, the tears flow. This increased secretion is only to be accounted for by the irritation produced on the ciliary nerves, through them on the ciliary ganglion, and through the ciliary ganglion on the long branch of the fifth pair, from which the nerve to the lachrymal gland is sent. If the eye be exposed to the action of brilliant dazzling light, the eyelids are suddenly and almost convulsively closed. The motions of the eyelids are certainly under the dominion of the will, since we can open or shut them at pleasure; but this sudden closure of the lids cannot be regarded as a voluntary act, but the effect of an involuntary irritation, propagated from the ciliary nerves, to those of the eyelids. To this it may be added, that the eyelids in persons when asleep contract on exposure of the eyes to strong light, without the person being conscious of what is occurring. Farther, it is well known, that even for a few seconds together the eye cannot be kept open against the sun, and that the eyelids involuntarily close. And lastly, when the iris, which receives its nerves from the ciliary ganglion, is inflamed, intolerance of light and constant blinking exist.

If the divisions of the first branch of the fifth pair which go to the eyelids, the integuments of the eyebrows and forehead, be injured, the functions of the eye are mainly disturbed; in such cases dilatation and fixedness of the pupil, and sometimes even amaurosis, occur. Morgagni* conceived that amaurosis, when it occurs from these accidents, is occasioned by the irritation continued along the frontal nerve, to those fine filaments which accompany the sheath of the optic nerve, which, in their turn, act on the optic nerve itself. According to Ribes,† Wardrop,‡ and Walther,§ the irritation is propagated from the wounded frontal to the ciliary nerves, on which nerves these appearances depend. Ribes conceives that the retina, which probably receives branches from the ciliary ganglion, is brought into a state of inactivity. Walther, on the contrary, thinks, that the iris becomes primarily, and the retina secondarily affected. It appears, however, probable, that the division of the frontal and supra-ciliary nerves, by their connexion with the ciliary ganglion and nerves, acts on the vessels of the iris and retina. Probably congestion of blood in the retina and iris takes place, by which their functions are destroyed, or the nutritive process disturbed. A singular case, in illustration of this subject, came under the notice of Professor Chelius,

---

* De sedibus et causis morborum. Lib. I. Epist. 13, No. 5.

† Recherches Anatomiques et Physiologiques sur quelques parties de l'œil a l'occasion d'une plaie de tete. En Memoires de la Societé de l'Emulation, T. II. p. 86.

‡ Essays on the Morbid Anatomy of the Eye. Vol. II. p. 180.

§ Grafe's and Walther's Journal. Vol. III. p. 1.

of Heidelberg: a girl received a blow on the forehead, which was followed by dilatation of the pupil, and loss of the sight of one eye. By the application of leeches to the forehead, cold, and repeated blisters, the sight was completely restored.

Wounds, or injury generally, of the ciliary body, produce, according to Beer, dilatation and fixedness of the pupil, and amaurotic blindness. Wardrop observed the same effects after a wound of the conjunctiva. These morbid conditions can only be explained by the injury of the ciliary nerves, and their reciprocal actions on the blood-vessels of the iris and retina. The dilatation of the pupil, by the use of narcotic substances, is attributed by most surgeons to their action on the ciliary nerves, and the action of these nerves on the iris. Between both eyes there is a very strong sympathy, which may be strikingly observed in the motions of the iris. If we close one eye suddenly, the pupil of the other becomes somewhat dilated; and, on allowing the light to fall on both eyes, the pupils contract. In many cases of amaurosis, where one eye only is affected, the iris retains its motion; and, on exposure of the diseased eye to strong light, the iris is not sensibly affected, being quite independent of the irritation on the healthy eye. If, on the contrary, the light should fall on the amaurotic eye, or if the eye be closed, the pupil of the healthy organ will not be changed. But if the healthy eye be exposed to the light, or if it be shaded, contraction or dilatation of the amaurotic eye ensues. Here the branches from the ciliary ganglion, accompanying the arteries to the retina of the affected eye, appear to be paralyzed in their action; whilst, on the contrary, the ciliary nerves of the iris seem to retain their power, and to be affected by the irritation of the other eye, which is extended to the moveable iris. But, in what way is a sympathy between the two irides kept up? According to Haller and Zinn, the sympathy between the two eyes is created in the brain. Wardrop, and others, explain it by the interlacement of the fibres of the optic nerves. Others, among whom Troxler may be mentioned, think that the irritation of one eye is propagated to the other by the nasal twig of the first branch of the fifth pair, and by means of the Schneiderian membrane. Against all these opinions, very forcible objections may be raised. As to the notion that the sympathy is created in the brain, it is scarcely possible to conceive that this organ would act at the origin of the optic nerve merely on the ciliary and not on the other nerves of the eye. Against the opinion of Wardrop it may be stated, that the optic nerve of an eye, which has lost for some time the power of vision, generally falls into a state of atrophy, and, therefore, most probably loses the power of propagating the irritation of one eye to the other. Against Troxler it may be urged, that the mucous membrane in each nostril is so separated by the bony and cartilaginous septum, close to the posterior nares, that no communication between the two nasal twigs exists.

As the motions of the iris depend on the ciliary nerves, so the sympathy between the iris of each eye also depends on the same cause. The pituitary gland is a body uniting the branches of the sympathetics, and of the nerves of both eyes. We know from Fontana's investigation, that branches of the sympathetic ascend on the carotid, and are connected with the pituitary gland. Bock, Cloquet, and Hirzel, have also observed these twigs, which come in part from the ascending branches of the sympathetic nerves, and in part from the carotid ganglion to the pituitary gland. The communication between the two ciliary ganglia, or the ciliary nerves, and the sympathetics, has been established beyond doubt. Hence the pituitary gland is evidently a medium of connexion between the sympathetic nerve of each side of the head, and, consequently, of the ciliary nerves of both sides, and, in this way, the sympathy between these organs is maintained. The pituitary gland has, moreover, in its fine texture and reddish gray substance, which particularly exist in the ganglia of the sympathetic, great similarity with a ganglion of this nerve. In addition to the sympathy existing between the motions of the irides there are other appearances which equally merit our notice. If one eye suffers, the other frequently suffers with it. If there be inflammation of the iris of one eye, or opacity of the lens, or staphyloma of the cornea, the same complaint not unfrequently makes its appearance in the other eye. These, and similar sympathies, can only be explained by the connexion between the ciliary nerves and ganglia of both eyes.

We will now briefly allude to certain sympathies existing between the eyes, and other organs situated at a distance from them. Bright light falling suddenly into the eye, sometimes occasions sneezing. This phenomenon may be explained by the connexion of the ciliary nerves with the branches of the sympathetic, and the sympathetic with the phrenic nerve. The peculiar tickling in the nose, which precedes the sneezing, is produced by the connexion of the ciliary nerves, and ganglion with the ethmoidal nerve of the first branch of the fifth pair, which leaves the orbit to be distributed to the membrane covering the conchæ.

In wounds of the eye, for instance in those of the iris, vomiting comes on which can also be explained by the communication between the ciliary and sympathetic nerves, and between the sympathetic and the eighth pair. Beer* sometimes observed, during the depression of the lens, vomiting ensue, if the ciliary body were irritated or injured. The connexion then between the ciliary ganglia and nerves, the sympathetic and par vagum, and

* Lehre von den Augen-Krankheiten, B. 2. s. 352.

the connexion between these and most of the other nerves in the body, are sufficient to explain the sympathy which exists between the eye and other organs of the body.

ON THE HUMAN VOICE.

By P. Mayer.

(*Meckel's Archiv. fur Anat. and Physiol. Second Part.*)

P. Mayer commences with an examination of the muscles which move the chordæ vocales, the chords themselves, the nerves which exercise an influence on the vocalization of sound, and considers the part which the epiglottis performs in this phenomenon. He also mentions the different kinds of voice, the difference between a strong and a soft sweet voice; explains the mechanism of the speech, and gives a new theory of ventriloquism.

In order to give an exact idea of P. Mayer's investigation, it is necessary to enter into some details on each of these subjects.

He entertains a different opinion from the one generally received, on the action of the muscles. Proving that the glottis may experience two different modifications in the opening of the chordæ vocales, and in the tension of these chords, he divides the muscles of the glottis into five orders, viz:—

1st. Muscles which open the glottis, and relax the chordæ vocales. (*Dilatores* and *laxatores.*) They are the two hyo-thyroid and crico-thyroid muscles. The first, in this case, rests on the thyroid cartilage, and draws the os hyoides on it.

The *crico-thyroid* muscle draws the thyroid cartilage on the cricoid, which remains fixed.

2d. The muscles which contract the glottis, and extend the chords, are the *constrictores* and *tensores glottidis.* These are the same muscles acting in an opposite direction. The first rests on the os hyoides, the second on the thyroid cartilage.

3d. The muscles which dilate the glottis, and at the same time stretch the chords, are the *dilatatores* and *tensores glottidis;* these are the crico-arytenoid muscles.

4th. Muscles which relax the chordæ vocales, and, consequently, draw back the glottis.

P. Mayer, who adopts the opinion of Soemmerring and Meckel, places here the lateral crico-arytenoid and thyro-arytenoid muscles. When these muscles both act together with the posterior crico-arytenoid, they become, on the contrary, tensors of the glottis.

5th. Lastly, the muscles which straighten the glottis, without acting on the chords, are the oblique and transverse arytenoid muscles; externally the arytenoid muscle and a fibro-cartilaginous layer, into which its fleshy fibres are inserted. This layer resembles the section of a circle, and is situated so that its convexity looks upwards, and the chord of the arch, which it forms, downwards. Between the fibrous bundles of this layer, a conglomerated gland is seen. This layer is called the superior vocal cartilage, and may be seen very distinctly in a great number of mammalia.

The inferior vocal chord is a fibrous, soft layer, and only presenting a small cartilaginous nucleus, about the size of a grain of barley, situated at the angle of the thyroid cartilage, very near that of the opposite side. These cartilaginous nuclei, considerably developed in most mammalia, are quite distinct in some species of monkeys. These bodies evidently increase the elasticity of the cartilages of the larynx, and, consequently, the power and intenseness of the vibrations.

On the Nerves of the Larynx.—It is well known that Rudolphi, in his Physiology, states, that he possessed a larynx which demonstrates the incorrectness of Magendie's assertions, relative to the distribution of the laryngeal nerves. There are anastomoses of the two nerves near the plexus, as the plates of Monro show; and it would be very difficult to decide to what nerves the filaments, proceeding from these anastomoses, belong. P. Mayer is of opinion, together with Scarpa, that the superior laryngeal is particularly destined for sensation.

On the formation of the Voice.—Dodart, in 1707, explained the modulations of the voice, principally by the dilatation and contraction of the glottis. Ferrein, and some years after Rungo, opposed this theory; and considering that the inferior chords alone were in the larynx, endeavoured to find the cause of sound in their vibrations. They made the different degrees of sound dependant on these ligaments, considering it as a point of no consequence whether the glottis were open or not, or whether both chords or only one were put in action. Liskovius published, in 1814, a work on the voice, in which, attacking the theory of Ferrein, he endeavours to revive that of Dodard, but with several modifications. P. Mayer successfully combats the opinions of Liskovius, and shows that the true theory of the voice consists in the union of the theories of Dodart and Ferrein, but giving to the latter the principal part. The following are the points which must be considered, in the production of the voice:

1st. The tension and vibration of the inferior chordæ vocales, an essential condition of this phenomenon. This vibration may be perceived on one's self, and in experiments on living animals. It is more accelerated in high sounds. By pressing on the larynx, the vibration is impeded, and with it the voice ceases. It can alone produce a great number of sounds. It is even sufficient, that one chord only should be put in action.

2d. The dilatation and contraction of the glottis are not the essential cause of the voice, but are necessary, in as much as the column of air is more or less pressed against the tendinous chords, and, consequently, produces their vibration to a great extent.

In order to prove that the variations of the opening of the glottis are not an essential condition of the voice, P. Mayer observes.—

1st. That Ferrein and Rungo produced very high sounds, when the glottis was widely opened.

2d. That the same sound can be produced during inspiration as well as expiration. But it is found, that the glottis is enlarged during inspiration.

3d. That the glottis is straightened during the production of the lower sounds, which is easy to be perceived, and which is necessary, in order that the vibration of the chords, till then very relaxed, should be effected. This explains why very low sounds can only be produced during inspiration.

4th. That the high sounds are more easily produced during inspiration than expiration.

5th. That it is impossible to elevate the sound by the simple contraction of the glottis, since the chords must be stretched. From these considerations P. Mayer concludes, that the variations of the opening of the glottis are only an accidental condition in the production of the voice. The elongations of the trachea during high, and its shortening during low sounds, have no sensible effect on these sounds in man and other mammalia; it is not the same with birds, where the trachea is situated above the glottis; and is susceptible of very extensive motions.

P. Mayer concludes by saying, that the organ of voice in man is neither similar to a stringed instrument, nor to a wind instrument, nor to a pipe of an organ, but to a pipe susceptible of vibrations, in the interior of which, two mouth-pieces are situated, the glottis and isthmus faucium; the first of these is the seat of voice, whilst the second modifies it. The opening of the tube may differ in size: it possesses several valves susceptible of varied motions, viz. the epiglottis, the velum palati, the tongue, which modify the sound produced by the glottis.

On the Influence of the Epiglottis in the Formation of the Voice.

The author has refuted in a preceding article the assertion of Magendie relative to the inutility of the epiglottis during deglutition. He here proves that this organ serves not only for deglutition, but even for the vocalization of sound. It is easy to be convinced on one's own person, that in low sounds the epiglottis rises and rests on the back of the tongue; but the most remarkable fact is, that the epiglottis should become altogether flat. In the high sounds, on the contrary, it becomes horizontal, and what is the essential point, its two sides roll inwards, so that the epiglottis forms a kind of horn, which receives the sound, and condenses the sonorous undulations. Moreover, the epiglottis vibrates at the instigation of the chordæ vocales, and these vibrations depend on its greater tension. It is probable that there is an exact relation between the tension of the chords and that of the epiglottis; these motions still serve to strenghten the sound.

On the Difference between the Full Voice (vox pectoralis,) and the Soft Sweet Voice (vox collaris.)

Liskovius thinks, that the latter voice results from the approximation of the chordæ vocales, and of their simultaneous tension, whilst the full voice is produced by the approximation of the chords only. The soft sweet voice is wanting in several individuals. It is very useful in singing, principally for the tenor, when it is necessary to pass from the full to the soft sweet voice, without a sudden transition.

P. Mayer rejects the theory of Liskovius on the soft voice, and makes the difference which exists between this and the full voice depend on two causes.

1st. The inferior chordæ vocales are more extended, and the glottis straighter in the soft voice. The larynx ascends, so that the voice is raised, as during the production of the full voice.

2d. The principal difference which exists in the full voice is, that the pillars of the velum palati are relaxed. In the soft voice, on the contrary, these pillars are elevated in proportion as the voice is raised, and constitute a longitudinal fissure, a second glottis of the isthmus faucium. At the same time the uvula is carried alternately forwards and backwards.

Ventriloquism,

According to P. Mayer, is produced in the glottis as the ordinary voice, but during inspiration. A ventriloquist begins by dilating his chest with a considerable quantity of air, to give sufficient resonance to his voice. The deception depends on the following circumstances:—

1st. The ear does not directly receive the sonorous undulations as before, and we look elsewhere than in the belly for the sounds, which we do not perceive coming from it.

2d. By the strong dilatation of the larynx and of the chest, the sounds are strengthened by a small echo, and become hollow, which leads us to believe that the person we hear is at a great distance below us.

3d. As the larynx descends for about an inch, the sounds are much deeper and more elongated.

4th. A fourth mode of deception is the almost complete shutting of the mouth; it is reduced to a simple fissure. The tongue is thrown back, the point of which rests against the palate; a means by which the sonorous undulations are to a great degree forced to pass by the nose. The noise of a ventriloquist is in general of an octave, much higher than his common voice, which completely changes the voice. It will be seen that this theory differs from that which supposes that the ventriloquist speaks during inspiration.—*Ibid.*

From the Medico-Chirurgical Review.

CEREBRAL AGENESIS.*

The species of paralysis described in this memoir, takes place in the fœtus or in early infancy, and depends on one of two causes—the first being an imperfect development, without alteration of structure, in certain parts of the brain—the second, an alteration of structure, accompanied by a defective development of the part affected, and of the neighbouring parts. The whole of these have been designated MAL-FORMATIONS of the encephalon, and the unfortunate individuals thus circumstanced, have been termed monsters, or monstrosities.

Formerly it was supposed that the nerves took their origin from the brain and spinal marrow; but modern researches have proved that they arise from the different parts to which they were formerly supposed to be sent, and thence concentrate towards the brain and spinal marrow, for the purpose of keeping up the known relations between the sensorium and system at large. It is clearly ascertained that the nerves are formed before the spinal marrow—and that this last is formed before the brain:—in short, the encephalon, strictly speaking, is the last part of the nervous system which is formed by the hand of nature. It is also a well known law in the animal economy that, in proportion as the parts are early formed, they are free from defect in organization—hence the frequency of malformations in the brain, as compared with the spinal marrow and nerves. Our author thinks, and we agree with him, that the term *atrophy* is an improper term for imperfect development of the brain. He has therefore adopted the word *agenesis*, which is quite unobjectionable in all respects. Dr. C. has pursued the following order in his researches—1mo. Complete cases, that is, where dissection took place; accompanied by remarks on the correspondence between the encephalon and the other parts of the system. 2ndo. Incomplete cases, (unaccompanied by dissection,) with deductions as to the nature and seat of the cerebral alteration. 3tio. Descriptions of the organic and functional altions of the members. 4to. The influence of the malformed brain on the other parts of the system and their functions. 5to. Considerations on the epoch at which this cerebral *agenesis* takes place—its comparative frequency, and the parts of the brain most subject to these malformations. 6to. To determine whether paralysis always takes place in the side opposite to the cause in the brain. 7to, and lastly, researches as to the cause, real or presumed, of this cerebral agenesis.

COMPLETE CASES.

1. *Case of primitive or congenital Agenesis of the Right Hemisphere.*—Mary Masson, aged 59 years, presented the following defective development in the left side of the body. The left arm was much less voluminous than the right, but was nearly of the same length—while the lower left extremity was much shorter, but nearly as thick as the right. All the motions of the left arm were so imperfect, that the member was rendered quite useless. The left lower extremity, from its shortness, caused great lameness, and deformity about the pelvis. The sensibility of the left side, as well as the sight of that eye, was very feeble. The defect of the intellectual faculties was not so striking. She spoke little, and her answers were very laconic. Her temper was mild and unirritable. For a long time this woman had laboured under hypertrophy of the left ventricle of the heart. An acute pneumonia supervened, and she died in hospital under the care of Messrs. Roston and Ferrus.

Dissection. The body was opened in the presence of Messrs. Cazaux and Lalesque, when the following appearances presented themselves. The skull was thick, and the dome over the *right* hemisphere was rather flattened. The meninges and vessels of the encephalon were natural. The convolutions of the *right* hemisphere were less developed than those of the *left* side, which last was of much greater volume than the other. The left lateral ventricle was more spacious than the right. The corpora striata did not materially differ in length, but in thickness they did. The right thalamus nervi optici was much less than the other. There was no appreciable difference in the two sides of the cerebellum, tuber annulare, or medulla oblongata et spinalis. The left side of the heart was hypertrophied, and the right lung hepatized.

We forgot to remark that this woman had an impediment of speech; but how far this impediment was connected with the imperfect development of the left side of the brain, it would be difficult to say. There can be little doubt, however, that the atrophy of the members and the defective sensibility of one side of the body were dependant on the congenital agenesis of the brain.

Case 2. *Congenital Agenesis of the Left Hemisphere of the Brain—Paralysis of the Left Side of the Body.*—A female, aged 51 years, died in the Salpétrière in the month of August, 1825, of acute pneumonia, who had been affected with congenital paralysis of the right side of the body. The whole of this side, the face, the mamma, the upper and lower extremities, were much less developed than the corresponding parts of the other side. The arm and leg were not only smaller but shorter than their fellows, and the arm was quite contracted. The motility of these members was much more deteriorated than the sensibility, which last, however, was somewhat obtuse. The intellectual faculties were evidently below par.

Dissection. The convolutions on the surface of the *left* hemisphere were much less

* Researches on Cerebral Agenesis and Congenital Paralysis. By J. B. CAZAUVEILH, Intern of the Civil Hospital of Paris.

prominent than those of the right—and indeed the whole of the *former* hemisphere was much smaller than the other. The right hemisphere was nearly half an inch more in diameter than the left. There was no appreciable difference in the ventricles, corpora striata, or thalami optici. The same might be said of the two lobes of the brain, and of the two sides of the medulla oblongata et spinalis. The nerves of the atrophied members appeared as large as those of the sound members.

Case 3. Mary M——, aged 68 years, who had long gained her livelihood by selling milk in the Salpétrière, had been deprived almost entirely of voluntary movements in the upper and lower extremities of the right side since her earliest infancy. The power of the arm had always been extinct; but its volume was as great as that of the other arm. The right lower extremity was considerably undersized in all respects, as well as shortened. Locomotion was performed by means of a crutch, and that very imperfectly. The woman was seized with acute pneumonia, and soon died after her reception in the infirmary of the Salpétrière.

Dissection. The cranium, membranes, and vessels, presented nothing particular. The anterior lobe of the *left* hemisphere was less developed than the corresponding one of the other side. In the interior of the former was found a cavity capable of containing an almond, and communicating, by means of a small fistula, with the lateral ventricle of that side. This cavity was lined by a red membrane, with bands crossing from side to side. There was no fluid in the cavity. The two lateral ventricles were of equal dimensions; but there was great inequality in the corpora striata and thalami nervorum opt. The *left* corpus striatum was one-fourth smaller than the *right*, and contained very little medullary substance. Nearly the same difference existed between the two thalami ner. opt. All the other parts of the cerebral and spinal system were equally balanced. The muscles of the paralyzed limbs were small and flabby; while the nerves were larger and of a yellower colour than in the sound limbs. The state of the intellectual faculties were not ascertained by the medical attendants; but they were reported to be below par.

Case 4. N——, aged 27 years, died in the Salpétrière on the 7th December, 1825, of chronic gastro-enteritis, on which had supervened acute pneumonia. This woman presented a defective development throughout the whole of the right side of the body. The arm was shrivelled and contracted, and possessed but little motility. The right lower extremity was less than the left, and its motility very imperfect, so that the individual was quite lame. The mouth was habitually drawn to one side, and the pupils of both eyes equally dilated. Sensibility was somewhat defective in the atrophied side. The intellectual faculties were considerably below par. She could not freely express with her tongue the limited range of ideas generated in the mind.

Dissection. The *left* frontal region of the head was much less salient than the right—while the posterior or sincipital region of the same side was in an opposite condition. The meninges were infiltrated. The whole of the anterior lobe of the *left* hemisphere was much flattened, and the substance of this lobe softened, in the centre, and in a well defined space. The ventricles were filled with serum, but there was no other appreciable inequality of development or structure in the two sides of the brain or spinal marrow.

The above cases are followed by a statement of several others in which the patients, paralytic from birth, are still living, and consequently the correspondence between the state of the brain and the atrophied members unascertained by dissection.

Archives Generales.

ON THE PASSAGE OF SUBSTANCES INTO THE URINE.

[*By Dr. Whoeler. Zeitschrift fur Physiologie von Tiedman.*]

This indefatigable Physician has made a great number of experiments, with the view of determining what substances pass from the stomach or other parts of man and animals into the urinary secretion—and what we are to infer from this phenomenon? The faculty of medicine of Heidelberg, decreed the prize to Dr. Whoeler, one of the most distinguished students of that school. We are sorry that our limits prevent us from giving the details of these experiments—we can only afford space for the results. The greater number of these experiments were made on dogs, to which animals the various substances were given in a little paste when their stomachs were empty. They were carefully watched after the ingestion of the experimental matters, and afterwards killed by prussic acid, as the most sudden and the least cruel mode of destroying life. Dr. W. rejected the plan of tying the œsophagus to prevent vomiting, in these animals; justly considering that such an operation must make an impression on the nervous system of the animal that would be very likely to derange the various secretory and excretory functions, and thus vitiate the conclusions. This circumstance has, unfortunately, been too much overlooked by experimental physiologists, and the deception, we fear, has been great in consequence. As it was found to be impossible to introduce a catheter into the bladders of dogs, it was a fortunate thing for the experimenter that he met with a dog who could be made, at any time, to evacuate the bladder by means of threats. This animal served for a great number of experiments.

I. Physiological Deductions.

It results from the numerous experiments, detailed in the Essay, respecting the sub-

stances which pass into the urine, that the following deductions are legitimate:—

A. Iron, lead, alcohol, sulphuric ether, camphor, animal oil of Dippæ, musk, and the colouring matter of cochineal, twinsole, vegetable green, and alkanet root, do not pass into the urine. Neither is the quantity of carbonic acid in the urine augmented by the ingurgitation of liquids containing much of that acid.

B. We find in the urine, but in a decomposed state, the following substances:—hydro-perferro-cyanate of potass (transformed into hydro-protoferro-cyanate)—the combinations of potassa and soda with the tartaric, malic and acetic acids (in the form of alkaline carbonates)—and the hydro-sulphate of potass, (generally in the form of sulphate of potass.)

C. The substances which form new combinations with certain matters of the animal body, and which are secreted in this state by the kidneys, are:—sulphur, which passes in the urine, in the state of sulphuric acid, and hydro-sulphuric acid—iodine, evacuated in the form of hydriodate—the oxalic, tartaric, gallic, succinic, and benzoic acids, which are found in the urine combined with an alkali.

D. The substances which pass into the urine unchanged are as follow:—the carbonate, chlorate, nitrate, and the hydro-chlorate of potass (the latter, however, more frequently decomposed,) hydro-protoferro cyanate of potass, subcarbonate of soda, hydrochlorate of barytes, silicate of potass, tartrate of nickel and of potass;—many of the colouring principles, as of indigo solved in sulphuric acid, of gamboge, rhubarb, logwood, beetroot, black cherries, &c.—many of the odorous principles, (partly modified in odour,) as oil of turpentine, juniper berries, valerian, assafœtida, game, castor, saffron, opium, &c. —the narcotic principle of agaricus muscarius (of Kamschatka)—and, in sickness, oil.

Notes ad A. The causes which prevent some substances (*A*) from passing into the urine, may probably be the following:—1. Certain matters are so changed by digestion and chylification, as to be no longer appreciable in the urine. This may easily be conceived of many of the colouring and odoriferous principles. 2. Other substances, as being more congenial to the animal organism, may be completely assimilated, and entirely employed in nutrition. 3. Others, again, may probably be expelled from the system by other channels than the kidneys, as, for instance, camphor and other odorant principles, which may escape by perspiration and pulmonary exhalation. 4. It is probable that some substances, when arrived in the intestinal canal, change into an insoluble state, and become incapable of absorption—or they may so act, by virtue of their astringent qualities, on the mouths of the absorbent vessels, as to indispose these vessels to take them up. This is probably the case with tannin, and the salts of lead, iron, and other metals.

Ad B. The circumstance of some substances passing into the urine in a decomposed state, may be attributed to two causes diametrically opposite. Thus the transformation of hydro-perferro-cyanate of potass into hydro-protoferro-cyanate, may depend on a deoxidation by some animal substance—whilst, on the other hand, the passage of hydro-sulphate of potass into the state of simple sulphate, may be owing to oxigination in the act of respiration.

Ad D. In respect to the fact of many substances passing into the urine little or nowise changed, it may be observed that most of these substances are of a diuretic nature, and consequently are *excitants* to the kidneys—hence our author thinks he may safely conconclude, that whatever excites the kidneys is secreted there with the urine. It is certain, however, that many things prove diuretic without being secreted in the urine. Affections of the mind, venesection, &c. have frequently the effect of exciting the action of the kidneys. Our author comes to the conclusion, (which indeed is the most ancient doctrine,) that all the proximate principles of the urine pre-exist in the blood. This is the conclusion, also, to which Messrs. Prevost and Damas came, as the result of their experiments.

II. Therapeutic Deductions.

The strong disposition possessed by the vegetable alkaline salts, to be converted into carbonates, in the animal economy, and to pass off in this form by the kidneys, naturally leads to the conclusion that these salts must prove useful in the internal treatment of uric acid formations and depositions in the kidneys and bladder. The alkaline carbonates have been found by experience useful; and are to be given but not too long, as they weaken the digestive powers. For these we may often substitute with advantage the supertartrate of potass, the sulphate of potass and of soda, the acetate and citrate of potass, and those fruits which contain vegetable alkaline salts, especially cherries, strawberries, &c. These last are found to render the urine alkaline, and may be taken with less disturbance of the digestive organs than the alkaline carbonates.

Acting on this principle, Professor Chelius prescribed cherries to a man who was passing considerable quantities of gravel in the form of uric acid. The disorder disappeared. When the cherry season was over, he took lemonade and cream of tartar with equal advantage. The author has found the supertartrate of potass extremely useful in the same disease.—*Ibid.*

PERMANENT EVIDENCE OF SUCCESSFUL VACCINATION.

Under this head, Dr. George Gregory has published a paper in the May No. of the Medical and Physical, in which he modestly

disclaims all title to much novelty—and only hopes to be useful, by refreshing the memory on certain minute points connected with vaccination. We shall give a very brief abstract of these minute points.

1. A proper vaccine scar should be distinctly defined, even after a lapse of 20 years; in order to which, it is nearly indispensable that the scab should remain on—or, at least, that cicatrisation should not be completed until the 21st day. In some cases, the cicatrix is formed by the 14th or 15th day—and then "vaccination is imperfect."

2. The true and perfect vaccine scar is circular, or nearly so. When common inflammation supervenes early, the scar is irregular in form, and the system is still open to the small-pox, more or less modified. The diameter of the circular scar is not material. The largest, however, which he considers compatible with safety, will be that of a sixpence, or small wafer.

3. The vaccine scar should be indented and radiated; though he does not insist on these appearances as a *sine qua non* in the proofs of perfect vaccination.

The sources of imperfection in the process of vaccination are chiefly the following:—effete virus; hence the inoculation should always be with fresh matter, and not by points, if possible:—pre-occupation of the system by some other important process, as dentition, viceral inflammation, fever, hooping-cough, porrigo favosa, or herpes:—and, lastly, a too advanced period of life at the time the process of vaccination is instituted.

For several collateral remarks and observations, all of a practical nature, and all indicative of the sound judgment and accurate discrimination by which the author is characterized, we must refer to the original paper in our cotemporary for May last.

In the same journal there are two papers connected with the subject of vaccination—one by Mr. Dalton, an eminent surgeon of Bury St. Edmonds, who describes an epidemic variola, against which vaccination made a bold and successful stand—the other by Dr. Morton, Physician to the Metropolitan Infirmary for Children, in which it is shown that, in his own experience at least, the proportion of variolous attacks after vaccination does not exceed four per cent. at the most. In the cases of failure, the disease was generally very mild.—*Ibid.*

OBLITERATION OF THE AORTA.—SCIRRHOUS DISPOSITION.

The Medical Society of Tours has published some memoirs, in one of which is an account of a case, the particulars of which are deserving of record. A woman, 36 years of age, of good constitution, and who had enjoyed good health till the age of 30, then perceived, in the anterior and lower part of the arm, a small, moveable, but not painful tumour, which gradually increased to the size of an egg, when it became very painful. It was extirpated by M. Dupuytren in 1821; but returning again, the operation was repeated by Dubois. The healing of the wound required the *arsenical paste.* In July, 1824, the woman felt shooting pains a little above the old cicatrix, and soon after had some slight fits of coughing, attended with constriction in the chest, but no expectoration. Catamenia continued. In October, the cough became violent, the breathing short, with paroxysms of suffocation, diminution of appetite, loss of sleep. Towards the latter end of November, all these symptoms acquired much intensity. On the 9th of December she was removed to the Hospital of St. Come. Her appearance differed little from that of health. She had little thirst, no fever, respiration slow, short, and difficult. It was pronounced by M. Bougon that there was cancer of the lungs. The suffocating fits and dry cough increased—pulse calm—abdomen soft and hot—tender. On the 11th January, 1825, the lower extremities appeared to be paralyzed, and the patient died, though still somewhat corpulent.

Dissection. A scirrhous swelling above the original scar—similar tubercles in the thyroid gland, and between the muscular fibres of the right thigh—scirrhous depositions in the substance of the heart—between the ribs and pleura—in all points of the lungs, some as large as a small hen's egg. Some of these tumours had the appearance of scirrhous, some of brain. Stony, calcareous masses occupied the mesentery—others of a medullary nature, the omentum. Scirrhous tumours were found beneath the mucous membrane of the stomach, duodenum, small intestines, gall-bladder; likewise in the kidneys, pancreas, and liver, which was gorged with them. In the interior of the cava inferior, a cylinder of a greenish colour and fibrous texture, was found. Below the third lumbar vertebra, the aorta was filled with a cylinder of a yellowish grey colour, in which was observed a small quantity of puriform matter. In the common and iliac arteries was a substance having the character of ancient coagulum. The texture of the vessels themselves was not altered. All the arteries above the obstruction, were free, and of greater size than natural. There were some tubercles found in the head.

M. Velpeau has adduced the above case as one eminently calculated to show, 1st, The alteration of the fluids in disease.—2dly, The possibility of obliterating the aorta, without producing death of the lower limbs.—3rdly, The general disposition, known by the name of the "cancerous diathesis."—4thly, The origin of cancer from other than inflammatory causes.—*Mr. Churchill, Med. and Phys. Jour.*

We might here ask the question, had the application of arsenical paste to the wound, any share in the development of this tubercular disposition (for we think the term *cancer* is hardly justified) throughout this unfortunate patient.—*Ibid.*

REMARKABLE TENDENCY TO PHLEGMASIÆ.

M. Lomel. Military Hospital, Strasburg.

This case is recorded in M. Broussais' "*Annales de la Medecine Physiologique,*" a journal which we have only recently procured in exchange, but which will hereafter be more known to our readers. There is a passage in the preliminary discourse to the first number for this year, which we shall extract, as not a little applicable to our own times and country. M. Broussais is speaking of a new French quarterly journal, on a plan nearly similar to our own, and which is to be conducted without any party-spirit, but solely for the purpose of collecting the rays of knowledge from all quarters, foreign and domestic—and then diffusing them in a concentrated form, through the various ramifications of medical society.

"Nous ne pouvons qu'applaudir à des vues aussi sages, aussi philanthropiques. Il était temps que les gens de bien se réunissent pour neutraliser les efforts de *ces coteries* où l'on excite *les passions* contre les hommes de la science qui n'en font pas partie."

We sincerely hope, indeed we are thoroughly convinced that the tide of dissention and party-spirit which has, of late, unhappily overflowed, in this country, is now rapidly ebbing—an event that must give great satisfaction to all those who wish well to medical science, and desire the respectability of its professors.

Case. A sub-officer of artillery, aged 23 years, of sanguineous temperament, entered the Military Hospital of Strasburg, on the 5th of December, complaining of acute pain, of four days' duration, in the lower part of the left side of the chest, verging round towards the epigastrium. The patient affirmed that he felt this pain first in the spinal column, and that it afterwards extended forward. Deep inspiration caused much inconvenience, as well as coughing, which last, however, rarely occurred. The left ribs were nearly motionless in the act of breathing—percussion there caused pain, but elicited a clear sound. There was but little increase of heat—the appetite was gone—the tongue white in the middle, and rather red at the tip and sides—bad taste in the mouth, which was dry and clammy—thirst—pulse frequent and hard. He slept pretty well, and the bowels were regular. Twenty leeches were applied to the affected side—he was put on the lowest diet—and diluent drinks were prescribed.

6th. The leeches bled copiously, and the pain was much diminished, but the skin was dry and hot—the pulse quick, but less hard—thirst, confined bowels. *Emollient lavement.* 7th. Same state—same prescription. 8th. The bowels opened; but the symptoms nearly the same. Fifteen leeches to the anus. 9th. Passed a good night—pain of side gone—can breathe freely. Pulse is still quick and hard.

10th. Acute pain in the right thigh, where a phlegmonous swelling appears. Thirty leeches to the thigh. 11th. The tumour diminished. Some febrile symptoms still remain. 12th. Another inflammatory swelling has appeared on one of the arms. Twenty leeches to this part. 13th. The swelling on the arm is diminished; but a similar phlegmon has appeared on the corresponding knee, to which 20 leeches have been applied. 15th. Inflammation has occurred in the ankle of the same extremity. Ten leeches to this new phlogosis. 18th. Some pain of the head is complained of, the other local inflammations having much subsided. 20th. To the headach were added swelling of the left side of the face, and erysipelas. The constitutional disturbance is now considerable. 21st. The swelling of the face is so great that the patient can scarcely open his eyes. A pustular eruption is appearing over the body, as large as variola. The febrile symptoms aggravated. 22d. The patient is delirious. Twelve leeches were applied to the temples; but the appearance of the erysipelas and the constitutional symptoms leave little hope of life. He died next day.

Dissection. Under the seat of erysipelas in the face, there was a depôt of purulent matter, and denudation of some of the bones. There was purulent matter, of no good quality, found in all the other seats of inflammation, above alluded to. There were six ounces of purulent matter found in one of the knee joints, the synovial membrane being much inflamed. The vessels of the pia mater were highly injected, and some portions of the brain were positively inflamed—the cerebral substance being generally firmer than natural. The vertebral canal presented a large quantity of bloody fluid infiltrated into the cellular tissue, but the medulla spinalis itself was firmer than natural.

In the chest there was very little variation from a state of health, except some pleural adhesion. In the stomach several zones of vascularity were observed in the mucous membrane, together with thickening and softening of that tissue. The internal surface of the small intestines was red throughout; some patches of inflammation in the large intestines. There was no other disease in the abdomen.—*Annales de la Medecine, &c.*

The above case is certainly remarkable for the powerful tendency to inflammatory action in different tissues, and consequently presenting different trains of phenomena. M. Broussais justly remarks, that such inflammatory tendencies can only be successfully treated by early and energetic depletion. Had such measures been employed in the above case, it is probable that the inflammatory irritation would not have spread from one tissue to another, with ultimate destruction of life.—*Ibid.*

COLICA PICTONUM.*

It appears that, in and about Orleans, there are great numbers of people employed in white-lead manufactures, and consequently the author of the volume under review, as chief physician of the Hôtel Dieu of that city, has had great experience in this painful and sometimes dangerous disease. Between the years 1820 and 1826, he has treated 147 cases of colica pictonum in the above hospital, without the loss of a single patient. The statement is perfectly authentic, as he has given the name of every individual, with the date of his entry and discharge, so that any misrepresentation would be immediately detected by the medical officers of the hospital.

The following are the symptoms which this disease has generally presented to Dr. Ranque: —At the beginning, distaste for food—nausea —slight salivation—disagreeable dreams:— soon afterwards, there is a vomiting of the alimentary matters mixed with bile of various colours, yellow, green, black, &c. together with some mucosities. Then we have severe pains about the umbilicus, in the hypochondria, in the epigastrium, loins, and iliac fossa, returning at intervals—these intervals being long at the beginning, but gradually shortened as the disease advances. The pains are always worse at night than in the day. They are generally accompanied by headach, pains in the knees, calves of the legs, ankles, soles of the feet, and insides of the thighs. These pains frequently alternate with those of the abdomen. They seldom attack the wrists, elbows, or shoulders. The abdomen is generally insensible to pressure, without any change in its natural temperature. There is no increased action of the arteries in any part of the body—no redness or dryness of the tongue—no thirst—no pyrexia—pulse generally below 60 in the minute. The constipation is most obstinate, and when stools are procured, the fæces are in little balls like goat's dung. The urine is usually clear and abundant. The expression of the eyes and countenance is altered, and indicative of suffering and inquietude—the *morale* of the individual is in a state of complete prostration. In a few cases, comparatively speaking, there were symptoms of inflammation in the abdomen. In a still smaller proportion of cases, the disease assumed a terrific form, being complicated with cerebro-spinal affection, the marks of severe organic changes being found in the brain, spine, and organs of sense.

The author does not propose his mode of treatment for those cases in which there are symptoms of inflammation in the abdomen. This inflammation he considers as quite a supervention, and in no way essentially connected with true colica pictonum, which is an affection of the nervous system quite independent of phlogosis. When abdominal inflammatory symptoms appear, the disease is to be treated by leechings alone, and the treatment of the colica pictonum is to be, for the time, suspended.

In the uncomplicated cases of colica pictonum, characterized by the symptoms already detailed, our author has invariably succeeded by the *methodus medendi* now to be described. This method consists in a plaster over the abdomen—another over the loins—glysters—and a certain potion internally. The plaster for the abdomen is composed of an ounce and a half of emplastrum galbani compos:—the same of emplastrum lyttæ—half an ounce of "thereaque"—one drachm of camphor, and half a drachm of sulphur. These are to be incorporated, secundum artem, and spread on a large piece of leather which may cover the whole front of the abdomen. Previously to its application, however, the plaster is to be warmed, and a drachm and a half of tartar emetic, mixed with some camphor and sulphur, is to be spread over its surface. The plaster over the loins is to be made in the same way as that for the abdomen, with the exception of the tartar emetic, which is to be omitted. Those parts which are in pain, in any other part of the body, are to be rubbed with a liniment, into the composition of which, the extract of belladonna enters pretty freely. A mixture is also taken internally, each dose of which contains 20 drops of the ethereal tincture of belladonna, (one ounce of the powdered leaves infused for three days in three ounces of sulphuric ether,) drinking plentifully of barley water, with or without gum arabic. The patient is to take no solid food whatever, and indeed as little of any kind of nourishment as possible. The lavement made use of by Dr. Ranque is composed of decoction of linseed—four ounces of oil—and twenty drops of the tincture of belladonna above described. The lavement and the potion are to be taken every day. On the third day, the abdominal plaster is removed —the lumbar one is allowed to remain on. If, however, the colicky pains should not have ceased by the third day, which they generally do, the abdominal plaster is to continue on some time longer. In such cases there will be a plentiful crop of antimonial pustules, and much cutaneous irritation, for which fomentations and poultices must be employed.

The cure required from two to twenty-five days. One hundred and twenty-nine were cured between the second and twelfth day—the remainder between the thirteenth and twenty-fifth day. In almost every case, the vomitings ceased on the second day of the treatment. By the fifth day, the abdominal pains ceased in the great majority of cases. On the sixth day the pains in the limbs ceased, and the constipation was overcome soon afterwards, which was the prelude to restoration of health.

The success which Dr. Ranque obtained by this method, in colica pictonum, unac-

---

* Memoire sur les Empoisonnemens par Emanations Saturnines. Par M. Ranque, Medecin en Chef de l'Hôtel Dieu d'Orleans. 8vo. 1827.

companied by any fever or inflammation, induced him to extend it to some other affections, viz. to chronic vomitings, (of apyrectic character)—to tetanus, (not traumatic)—to epilepsy, considered dependant on abdominal derangement—to puerperal mania, &c. and in various cases he has been fortunate.

From what appears in this volume, it is evident that the author, although he lost none out of the 147 cases recorded in the tables, lost other cases which are not detailed. He says, indeed, that these were of a different character—that they were complications—and that the patients died of the supervening affections. But still these cases ought, in all fairness, to have been given. Assertion is no proof in medical matters. We agree with the author, however, in believing that colica pictonum is originally and commonly an affection of the nervous apparatus of the alimentary canal; and that it affects other parts of the system consecutively. We believe that the disease may run its course, without materially or evidently affecting the vascular system. But there are cases in which both systems are affected, and then a modification of treatment is necessary. It is evident that the principle of Dr. Ranque's treatment is founded on counter-irritation externally, and sedatives internally—the laxative injections being no more than is indicated in all torpid states of the bowels. The counter-irritation, so powerfully effected by the extensive application of the antimony, must doubtless make a great and salutary impression on the disease, and it is worth the attention of practitioners, when they meet with this painful malady.

We shall here introduce a case and some observations by Dr. Pascal on the COLICK of MADRID, a disease nearly allied to, if not identical with, that under consideration.

Case. H. Henry, a soldier of the first regiment of infantry, aged 22 years, of good constitution and bilio-sanguine temperament, entered the Military Hospital of Madrid on the 9th May, 1824, for an intermittent fever, which disease persisted till the beginning of July. At this time, he was seized, without any apparent cause, with obscure deep-seated pain in the abdomen, obstinate constipation, and dysentery, without either dryness or redness of the tongue. The abdominal pains soon became excessive, and to these were added pains along the spine, and under the sternum, as also along the arms. From this time the patient had no rest—the insomnium was constant—eyes haggard—the muscular movements irregular—the temper irritable—great prostration of strength. Paralysis of the upper and lower extremities now appeared—and the bowels, which hitherto had remained obstinately confined, became soluble. He died on the 17th July. Diluents, antiphlogistics, and warm baths, were the only means employed.

On dissection, the membranes of the brain were found highly injected; but the cerebrum and cerebellum were in their natural condition. There was some serous fluid in the lateral ventricles—the spinal marrow was highly injected, and firmer than natural—the lungs were gorged with blood, but showed no trace of inflammation. The tissues of the heart were much injected, and the internal surfaces of its chambers were red. The mucous membrane of the stomach was pale—the intestines natural. The ganglia of the abdomen were almost all red, and most of them apparently enlarged.—*Mem. de Med. et Chirurg. Milit. Vol.* xix. 1826.

In the same volume Dr. Pascal relates several other cases of the Madrid colick, in which the ganglionic system presented similar appearances. Hence he concludes that the traces of inflammation which are found in these subjects, are consecutive of the original affection of the ganglionic nerves.

In a memoir published in *the Journal Complementaire*, by Dr. Marquand, the same view of the Madrid colick is taken. This gentleman had the charge of the Military Hospital of ST. JACQUES DE COMPORTILLE, in which institution there were never fewer than 40 or 50 patients affected with this disease. The following is the course which the malady generally pursued, according to his observation: slight and transient pains were first complained of, in the line of the colon, especially of its transverse arch, without any material disturbance of the functions. Afterwards moroseness of temper was conspicuous—inappetence—difficult defecation, but not decided constipation—much flatulence and discharge of wind. This state lasted two or three days, at the expiration of which all inclination to stool ceased, and the flatulence disappeared. From this period, gastric symptoms were developed. There was pain in the epigastrium—palid and dejected countenance—small, slow, and contracted pulse—scanty urine—dry but not hot skin. The patient was inclined to sit with his arms folded on, and pretty forcibly compressing the abdomen, the trunk of the body bent forwards. To these symptoms succeeded hiccup and vomiting of glairy and bilious matters. No sleep. The belly now became flattened, and pain was complained of in the right hypochondrium, and sometimes in the umbilical region, but without any diminution of the epigastric pain. The eye became yellow, and the yellowness spread to all other parts of the body. These symptoms gradually increased, and led to the tomb:—sometimes with mere marasmus—sometimes with paralysis. In the course of the disease there were occasional remissions which promised convalescence, but these were deceptive.

The treatment which proved most successful in this terrible disease was a combination of opiates and purgatives.—*Ibid.*

ERGOT OF RYE.

We learn from a long paper on this article by Dr. Aug. Goupil, in the third number of the *Journal des Progrès des Sciences et Insti-*

tutions Médicales, &c. the following useful or curious facts relating to it.

Its poisonous qualities were recorded so long back as the year 1096, at which period many persons seem (according to the *Abrégé Chronologique* of Mezerai, upon the authority of *Sigebert de Gremblour,*) to have suffered a sort of dry gangrene from eating unwholesome bread. A similar event occurred in Germany in 1596, on which occasion the effect seems to have been traced to the right cause.

As a medicine it was known to the quacks long before its adoption by the regular faculty; and its powers of action on the uterine system were among the secrets possessed by certain midwives, at a period when the duties of the obstetric department were confined as well as confided to them.

All our readers know from what quarter its existing celebrity took its rise: and we shall not repeat the history, with which they are sufficiently familiar. In France its efficacy was put to the proof by Chaussier and others, at the Maternité—where it failed to give satisfaction—in all probability because the quality of the article employed was bad; but many other practitioners have tried it, and concurred in giving it their fullest approbation.

The *ergot*, or spur which appears upon the rye, is a morbid excrescence—not peculiar to this grain; others, such as barley, oats, and even wheat, are affected with it, though the rye more frequently than any. Of the nature of this parasitical affection we have given some details on a former occasion, and cannot possibly find space for an enumeration of distinctions which M. Goupil has traced through a variety of authors, and to a variety of sources, too numerous for us to take account of. It is laid down, however, as an essential point for attention, that when the *secale cornutum* is to be employed for medical purposes, it should be selected from the growth of the current year; it should be preserved also in bottles hermetically sealed; and never be bruised or powdered till the moment that it is wanted.

We need not refer to the instructions conveyed in this *most elaborate* paper as to the formulæ or the doses convenient for the administration of this medicine. Its action is rapid; but it is *not poisonous.* This assertion, however, demands some explanation. That *spurred rye* made into bread will cause convulsions and gangrene, is undeniable; but it does not follow that it will have these effects when given medicinally. When eaten in the former shape, the quantity swallowed, and the reiteration of the ingestion during many days, will explain all this. It has no injurious effect when administered during parturition, upon either mother or child. It is customary in some parts of southern France, to give it liberally to cows when about to calve, and to other female animals in similar circumstances, and it never hurts either parent or offspring.

M. Goupil proceeds to say as follows: "On various occasions, before venturing to prescribe for my patient a drachm and a half of the *secale,* I have myself, at distant intervals, swallowed two drachms, and even to the amount of two and a half; when all the evils I have experienced have amounted to sickness, a propensity to vomit, pains in the bowels and headach—which I have been inclined to attribute to excessive irritability of the gastro-intestinal mucous membrane."

The innocence of the remedy is looked upon as indubitable. Then comes the question, however, whether practitioners may place equal reliance on its efficacy? If, in a few instances, (and they are said to be but a few,) the medicine has failed, the cause of the failure is supposed to have consisted either in the inefficacy of the doses, or the general participation in occasional *fallibility,* which this article of therapeutics must be supposed to possess in common with all others. In addition to this, it is very fairly argued, that its effects have not been yet sufficiently studied, while we are by no means perfectly acquainted with the circumstances that may hinder its action. In this failure it is countenanced by the analogy of other remedies of an established *specific* virtue, such as bark and mercury. Other objections have been urged against it, which this candid and intelligent author in a fair and warrantable manner, by adducing the concurrent testimony of many eminent men—who are well able to discriminate between spontaneous efforts of nature, and the sequence of medical interposition. We are glad to see, among the list, that the name and contributions of our excellent friend and correspondent, Dr. Henry Davies, have not been overlooked, or unappreciated.

To give an epitome of the cases appended to the didactic part of this paper is totally out of our power. But we leave it with our warm commendations, as a valuable contribution to clinical obstetrics.—*Med. Repos.*

HYDROPHOBIA.

The following abstract of a very interesting paper, in the 2d volume of the *Journal des Progrès du Sciences et Institutions Médicales,* is taken from Hufeland and Osann's Journal.

Dr. Urban is convinced, from numerous observations, that the rabid virus, whatever may be its effects on the general system, may remain in a wound unabsorbed, even for years, and all the time preserve its virulent powers. Certain states of the system, however, are necessary to the development of these powers: most who are bitten by rabid animals escape with impunity; and even among those who suffer, the effects of the bite sometimes (though rarely, it must be confessed,) do not appear until years afterwards.

It is unnecessary to describe the course of the disease, of which there have been lately too many opportunities of verification. One of the most distressing, and probably one of the most curious circumstances connected

with its history, is its increasing frequency. There can be little doubt of this fact. We recollect listening to an account of the death of a lady, from the consequences of a bite or scratch inflicted by a lap-dog, when given by our venerable teachers (who had seen the case) as to a tale of wonder and astonishment —blessing ourselves that the thing was past, and hardly imagining that hydrophobia was a disease to which we should ever have occasion, or even opportunity, to direct our attention.

In all the cases observed by Urban, one or more pustules, about the size of a grain of mustard, and sometimes that of a pea, containing reddish-blue lymph, formed around the bite; and this lymph was found to possess all the properties of the rabid virus. He is of opinion, that this virus, displaying itself in or near the part bitten, is by no means absorbed into the system; and he is firmly persuaded, that the part may inflame and become covered with pustules solely through the agency of fear, inattention to proper regimen, and strong emotions, either of anger or sorrow. These pustules (or *phlyctenæ*, as they are technically called,) are, in fact, depôts, or central points of the virus. M. U. has never observed them under the tongue—probably because he prevented their formation there by his plan of treatment—which, being the result of observation in no less than forty cases, deserves to be promulgated. It comes before us accompanied by very strong commendation; and we shall give it as nearly as possible in the words which are now under our eye, in the work above alluded to.

"I. Let the part bitten be washed with warm milk, as highly acidulated as possible. That the rabid virus is possessed of alkaline properties, is proved by its turning vegetable blues green—a remark made by Dr. Urban as to the virus of the lower animals.

"II. Plunge the limb affected into hot salt water; or if this be not practicable, let it be well covered with sponges, or with linen, steeped in a fluid of this nature, both in order to wash the wound, and to soften the skin, so as to facilitate the next application.

"III. We are now to apply cupping-glasses to every practicable spot about the wound, and these are to be continued for two days: the glasses are to be warm, and must be renewed until blood and serous exudations appear upon the skin. Where cupping-glasses cannot be applied, the wound must be dilated by cutting instruments in all directions, with an especial view to the exposure of the deep seated parts. Every description of pressure is then to be made upon the wound until it becomes perfectly dry.

"IV. A thick compress, steeped in some saline solution, is then to be applied over the wound, and maintained *in situ* by a bandage. Of course this will be repeated wherever there may happen to be the slightest indication of injury, even the mere impression of a tooth without abrasion of the skin. Common salt, from its greater tendency to humidity, is preferable—an ounce, or an ounce and a half will be dissolved in a pint of milk or of water—adding a few leaves either of cicuta or of walnut, so that the confidence of the patient (upon which great stress seems to be laid) may not be shaken by the simplicity of the remedies: the choice of the article used for this is of little consequence—the important matter being to keep the wound continually wet.

"V. For this purpose, care must be taken not only to renew and to steep the compress twice a day, but the patient should be exhorted to pour salt water upon it every two hours. Dr. U. conceives that the reunion (healing) of wounds treated in this manner, may be ventured upon at the end of a fortnight or three weeks.

"VI. But it will be of the greatest consequence to insist upon it that the patient shall pay particular attention to the bitten parts, and inform the physician the moment they shall become affected with itching, or pain, so that immediate attempts may be made to arrest the progress of the disorder. Dr. U. never omits, when the redness and pain are increasing, to look attentively for a tumour, surrounded by a red circle, and exhibiting vesicles. This phenomenon, which often takes place between the seventh and eleventh day of the preservative treatment, requires no other attention than that already described, excepting that the pustules (if any) should be carefully opened and washed."

M. Urban attaches so much importance to that part of the patient's conduct which relates to watching the wounds, that he exacts from him a solemn written promise that he will do so. This gentleman also declares that every unknown dog which bites as he runs along, should be considered rabid. The old method of firmly tying up the limb bitten, is more than questionable as to its effect; and it is asked whether by the powerful constriction thus made upon the vessels, the absorption of the virus may not be facilitated?—*Lond. Med. Repository.*

PULMONARY APOPLEXY.

Dr. Bouillaud.

The above term sounds rather oddly to English ears; but it is by no means an improper term, and the authority of Laennec is a sufficient passport for its introduction into the pathological nomenclature of the present day. Laennec was the first who traced, with any degree of minuteness, the nature of pulmonary apoplexy, or hæmorrhage; but many important additions have since been made to our knowledge of this serious malady. It is with the view of filling up lacunæ, that the distinguished Physician of the Cochin Hospital comes forward on the present occasion.

Case 1. E. T. Gerault, aged 58 years, Professor of Belles-Lettres, of sanguineous and strong constitution, with large chest, and otherwise well-formed, was admitted into the

Cochin Hospital on the 22d September, 1822. He stated that he had been ill for six years, after a voyage to a tropical climate. Since that voyage, he had been subject, to what he called attacks of *asthma*, especially in cold and damp weather. The intervals were of various duration, but they had become shorter, and the attacks more severe, since a suppression of the hæmorrhoidal discharge. M. Gerault had been at the hospital two years previously, for the same complaint, and was considered to be labouring under aneurism of the heart. In 1821, he had spat up some blood for a fortnight. Some time subsequently, after a long walk, he became affected with dyspnœa to a great degree, so that he could scarcely move without a sense of suffocation, constriction in the centre of the thorax, and decubitus difficilis on the left side, some cough, demi-extinction of voice, regular strong pulse slightly accelerated, tongue white and moist, trifling diarrhœa.

At 11 o'clock at night, of the first day in the hospital, Dr. B. was summoned, and found the patient in the following condition:—sitting up in bed, breathing with difficulty—face pale—eyes haggard and prominent—cold perspiration over face and body—continually rocking from side to side—great wheezing in the bronchia—all the respiratory muscles in strong action. The pulsation of the heart could not be heard or felt—the *former*, probably from the great wheezing, the *latter*, from the violent agitation of the chest in respiration. The pulse was precipitate and irregular, the voice almost extinct, the patient earnestly supplicating for relief. M. B. bled him on the spot. The blood was black and thick. It issued with difficulty, at first, but afterwards sprang out with force. Sixteen ounces were abstracted. This measure, together with a sinapism to the back, and some antispasmodic medicine, produced a degree of relief, and the patient was able to lie down, with the head well elevated. 12*th September*. The patient felt himself much better; but still his condition appeared very alarming to his physician. The mucous wheeze (râle muqueux) continued—the sputa were viscid, and tinged with blood—breathing very short—face of a violet colour—lips livid—pulsation of the heart imperceptible by the hand—audible faintly in the front of the sternum—pulse soft and embarrassed. Cupped and scarified on the chest—colchicum and expectorants. 13*th*. The melioration was considerable this morning; but the face was red and partially livid. 14*th* to the 30*th*. The respiration is sometimes free, sometimes impeded—countenance pale—hands blue. During the first eight days of October, the patient spat up a large quantity of black blood—the legs swelled. On the 13*th October*, there was another abundant hæmoptysis, and the 14*th*, he died.

Dissection. The right pleura costalis and p. pulmonalis were adherent—in the left pleura, there was a pint of reddish fluid. Both lungs presented the cadaveric engorgement at their inferior parts (which happened to be the *anterior*, as the body was turned on the face soon after death)—the posterior parts of the lungs were crepitant. A considerable proportion of lung, however, was found in a state very different from that of mere cadaveric congestion—namely, with a quantity of blood extravasated in the air-cells, and combined, as it were, with the pulmonary structure itself, forming a substance resembling spleen. There was, therefore, but a small proportion of lung which was permeable to the air. The bronchia were gorged with sanguinolent mucosities, and the mucous membrane was of a violet colour. In the pericardium, there were a few ounces of fluid, of a sanguinolent and flocculent character. The heart, which was gorged with blood, was double its natural size, and, together with the effusion, encroached greatly on the lung of that side. The auricles were dilated in their cavities, and thickened in their parietes. The walls of the ventricles, especially the left, were in a state of hypertrophy. There were several other alterations of structure about the heart and arch of the aorta, which we need not specify.

In the abdomen, the liver was found gorged with blood, and, in fact, in nearly the same state as the lungs. The mucous membrane of the stomach was injected, and, in some places, inflamed.

The other case is not materially different from the one we have detailed, and may be passed over. It is this state of pulmonary engorgement, or apoplexy, which generally gives rise to hæmoptysis, the latter not resulting, ordinarily, from the rupture of any large vessel. In ulcerations, however, of the lungs, as in ulcerations of the intestines, the blood may and does come from the mouths of open vessels, and not by a species of exhalation.

The auscultic characters of pulmonary apoplexy, as laid down by Laennec, are the absence of respiratory sound in the part, and the râle muqueux. But it is not very easy always to distinguish this engorgement from common hepatization, and other morbid states, in which the cells of the lungs are not permeable by the air.—*Archives Generales.*

Treatment of Acute Rheumatism by Tight Bandaging.—[*Archives Gén. de Médecine, Juin*, 1827.]

In the number of this Journal for October and January last, a short account was given of a proposal made by M. Velpeau of Paris, to treat the several varieties of diffuse subcutaneous inflammation by graduated pressure, applied by means of the roller bandage. The same plan has been lately tried with great success by Dr. Varlez, surgeon-in-chief of the military hospital of Brussels, in the treatment of acute rheumatism of the joints. He has related several cases in which the bandage was applied in the acutest form and stage of the disease, when the redness and swelling were great, the throbbing pain

violent, and the general fever high, and in which the treatment was crowned with speedy and complete success. In almost every instance the application of the bandage is followed at first, and for two or three hours, with increase of the pain, so that the patient can with difficulty be persuaded to persevere; but soon afterwards the pain begins to abate, and the abatement then advances with rapidity. Dr. Varlez generally moistened the bandages with an emollient decoction, which, besides having the ordinary effect of emollients, were useful by increasing the pressure.—*Edinburgh Med. and Sur. Jour.*

Treatment of Inflammation of the Tongue. (*Horn's Archiv. für Medizinische Erfahrung.*)

The following cases of this rare but alarming disease form a useful appendix to the paper of Mr. Martin in our last number, and will show that the severe but effectual practice adopted by him may sometimes be superseded by milder treatment. *Case* 1.—A stout man, 68 years of age, by trade a mason, was attacked with pain in the throat, redness of the fauces, and swelling of the tonsils, but without much fever. These symptoms were considerably diminished by leeches applied to the angles of the jaws, emollient gargles, and a mustard pediluvium. But in consequence of exposure to cold he was soon afterwards seized during the night with a tormenting sense of tightness at the root of the tongue, difficulty in speaking and swallowing, and ere long with swelling in the tongue and impending suffocation. When his physician saw him in the morning he could not speak, the pulse was very quick and feeble, the countenance pale and anxious, and the tongue filled the whole cavity of the mouth. On account of the firmness with which the tongue was pressed against the roof of the mouth, and the patient's inability to separate the jaws to half the usual distance, it was found impossible to make on its upper surface more than two short incisions, from which very little blood flowed. An incision was therefore made with the lancet into each sublingual vein; and when the blood ceased to flow, fresh incisions were made, and the discharge promoted by injecting warm water into the mouth. In the course of two hours the swelling was so much diminished that the man was able to rinse the mouth with warm milk, after which a blister was applied to the neck, and a purgative enema administered. A rapid amendment then took place, so that before the close of the day he could speak intelligibly; and his recovery went on steadily. *Case II.*—Another case of a less acute form than the former. It had existed eight days before it came under treatment. The patient had little pain or fever, but swallowed with great difficulty, and could breathe only in the upright posture. The case was cured by blisters, gargles, and the mustard pediluvium.—*Ibid.*

CEPHALALGIA—AGUE—TUBERCLES.

[Bicètre. M. Guerard.]

A young man, (aged 20 years) of feeble constitution, had become affected with tertian fever three months before the date of report, accompanied by cephalalgia frontalis and giddiness, coming on periodically, but by no means in accordance with the fever. He had been bled and blistered before he entered the hospital, but without relief to the cephalalgia. This last, however, gave way to a seton in the nucha, and blisters to the temples. In the course of a fortnight after his entrance into the hospital, he began to evince signs of imbecility—general weakness—want of power in the lower extremities—involuntary discharge of urine. In two months more a dirrhœa came on, and proved very obstinate, although the other functions of the body appeared natural, and the appetite was craving. The emaciation advanced very rapidly—the intellectual faculties became almost annihilated, and he died about four months after he came into the hospital.

Dissection.—In the cerebrum there was nothing particular to be observed, except a very little more serum in the ventricles than usual. But on the upper surface, and on the median line of the cerebellum, was discovered a tumour, an inch and a half in diameter, of a yellowish-white colour, and very firm consistence—in fact, it was a veritable tubercle, surrounded by a softening of the cerebellum to some small distance. There was no other disease in the head. The lungs were found studded with tubercles, and the peritoneum, both lining the parietes of the abdomen, and where it is reflected over the viscera, presented innumerable tubercles, of all sizes, from one to sixteen lines in diameter. Several of the intestinal folds had contracted adhesions, and the whole mucous membrane of the small intestines was covered with ulcerations of various sizes, many of them penetrating to the peritoneal coat.

The lesion discovered after death in the brain, is certainly not in accordance with the ideas generally entertained, respecting the functions of particular parts of the sensorium.

INFLAMMATION OF THE SPINAL MARROW.

It is of great importance to accumulate facts elucidating inflammation of the spinal brain, since this is supposed by many to play an important, though unsuspected part, in many dangerous diseases.

A young lad, aged 16 years, was admitted into the Necker Hospital, on the 3d August, 1826, ill (according to a vague and scarcely intelligible account given by himself) about three days. He seemed abstracted and confused in his ideas, could only answer in monosyllables, and was constantly moving about in his bed. It appeared, however, that he had wandering pains in his limbs, headach, and diarrhœa. The countenance was yellow

—cheeks red, epigastrium very tender, tongue red at the sides and tip, but moist. Under the idea that the boy laboured under gastric and intestinal inflammation, he was leeched, fomented, and had diluents given for drink. Next day (4th August) the leech bites were still bleeding; but there was no amendment. The tenderness, which was supposed to be confined to the epigastrium, was now ascertained to exist all over the body, no part of which could be touched with the finger without causing the patient to cry out, on account of pain. This excess of sensibility over the surface induced the medical attendant to suspect that he had been deceived in his diagnosis, and that the seat of the disease was in the spinal marrow. As the leech bites were still bleeding, and the boy very weak, M. Honoré contented himself with the exhibition of diluents. The mother of the patient having come to the hospital, they learnt that he had plunged eight or ten times from the bridge of Jena into the Seine, on the 31st of August—that, at the last plunge, he had hurt his left leg, but so slightly that he walked home—and that, during the succeeding night, he had been very restless, and complained much. 5th August. The patient was delirious, and talked incessantly, but incongruously. Mercurial frictions every six hours. 6th. All the symptoms aggravated, except the diarrhœa. The frictions could not be properly applied, on account of the universal soreness of the body. 7th. Extreme agitation—cries out constantly—convulsive and involuntary movements, especially of one of the lower extremities—cannot lie a moment in one position—face flushed—pulse quick and strong—skin hot. Twelve ounces of blood from the arm—small doses of laudanum—warm bath. 8th. No alteration. 9th. Prostration of strength—died in the evening.

Dissection. The membranes of the brain were sound—the cerebral substance somewhat more dense than usual. The envelopes of the spinal marrow appeared natural, and the medulla spinalis itself, at its upper part, seemed healthy. Opposite to the 7th cervical vertebra, the spinal marrow was evidently softened, and infiltrated with pus. This species of lesion extended to the fourth or fifth dorsal vertebræ, from whence, to the cauda equina, the organ was unaffected. In the chest, the lungs were sound; but the pericardium adhered to the heart throughout by a soft, cellular, lamellated tissue. There was no other organ or part in a state differing from health.

We think the inflammation of the pericardium, by which that membrane was glued to the heart, played no unimportant part in the symptoms and death of the patient.—*Medico-Chirurgical Review.*

GASTRO-ENTERITIS.

An Irishman had been attacked with fever, and treated in the Fever Hospital, under Dr. Tweedie, who ultimately sent the patient into St. Bartholomew's Hospital, "from the supposition that syphilis had supervened; a bubo having manifested itself in the groin, and a putrid sort of ulcer being discovered on the penis." When admitted, the reporter remarked a wildness of expression and flushed state of the countenance, general tremour of the muscles, and mental imbecility, "sufficiently characteristic of the state and stage of existing fever." He had a dark brown tongue, somewhat moist, and a soft compressible pulse at 100 in the minute—depression of vital powers. In the groin was a large circular slough, emitting a putrid odour. A similar slough was seen on the dorsum of the penis. Mr. Lawrence, supposing that the patient was in the last stage of fever, merely exhibited a few grains of rhubarb, and ordered cold applications to the head, with poultices to the ulcers. Next day all the symptoms were worse, and he was leeched on the temples. Saline medicines with sulphate of magnesia—small quantities of wine and water. On the next day but one the patient died.

Dissection. The alimentary canal was laid entirely open, when it was discovered that the large intestines were in a state of extensive disease. "They were studded, more or less, nearly throughout their extent, with gangrenous ulcers, mostly of the size of an ordinary split pea." The peritoneal covering was sound, but the ulcerations had destroyed the mucous and muscular coats of the bowel. The bag of the cæcum presented one uninterrupted aspect of gangrenous ulceration; and, on sponging the parts, spots of mortification were seen, the intervening portions of mucous and muscular tunics being almost destroyed. The ascending colon was thickly studded with ulcerations, about three lines apart from each other. The transverse colon was also ulcerated, but the ulcers were thinly scattered. The descending colon and sigmoid flexures were nearly exempt. The other viscera of the abdomen and thorax were sound. The arachnoid was opaque, and the pia mater partially infiltrated, and its vessels congested. The substance of the brain was firmer than usual; and rather more than the natural quantity of fluid was found in the ventricles.—*Lancet, No.* 203.

Remarks. Some degree of censure is conveyed by implication on the physician of the Fever Hospital, who sent this patient to Bartholomew's for the treatment of syphilis. Our knowledge of the talents and sagacity of Dr. Tweedie would induce us to conclude that there was some error in the report. Even if syphilis had been unequivocal, the state of fever in which the patient was, when admitted into Bartholomew's, precluded all idea of the application of specific treatment to that part of the complaint. But the state of the intestines, as discovered on dissection, was precisely that condition which cuts off nine in ten of those who go through the fever and die afterwards, without apparently adequate cause. We have brought forward several in-

stances of this kind, and shall not cease to urge the attention of our brethren to this important investigation.—*Bartholomew's Hospital.*

CASE OF TRAUMATIC TETANUS, SUPERVENING A SLIGHT ULCERATED WOUND OF THE FORE-FINGER.

John Cooper, æt. 32; admitted on the 22d of May, under the care of Mr. Earle. The account received from this patient is, that on the 15th May, he received a slight wound on the fore-finger of his right hand from the falling of the tail-board of his cart. He treated it very lightly, and pursued his accustomed labour until yesterday morning (21st) when he experienced a slight shivering, together with a degree of stiffness about the back of the neck, which rendered the motions of the head painful and difficult. Conceiving these symptoms arose only from a slight cold, he went out as usual, but returned in the afternoon exceedingly unwell. His wife was sent for about four o'clock, who found him in bed lying on his belly, and unable to turn. He complained of great pain in his back and neck, more particularly in the throat. At this time there was no trismus. The symptoms alarmed her, and she sent for medical assistance. At 8 P. M. a medical gentleman saw him, who inquired of the patient if he had received any injury. At first he was answered that he had not; but, upon recollecting himself, informed him of the slight injury he had received on the finger. The wound was examined, and found as the patient had described it, nearly well. The pulse at this time was full and hard; the spasms, which occurred about every half hour, were very severe, and there was some degree of trismus. He was immediately bled from the arm to ℥xxxvj. which produced syncope. Hydr. submur. gr. iv. opii gr. j. 2ndâ. vel 3tiâ, quâque horâ.

The bleeding afforded some relief, feeling somewhat easier about his back and throat.

His medical attendant again saw him the next morning. He had passed a very restless night, and was evidently much worse. The spasms recurred every fifteen minutes; pulse hard and 120; trismus to a considerable degree; bowels not opened since yesterday evening. He was sent to the hospital at half-past twelve o'clock P. M., when he was found labouring under the following symptoms:—Muscles of the back and neck very rigid; pain at the root of the tongue; much difficulty in, and aversion to, swallowing; some degree of trismus; countenance expressive of very great anxiety; respiration hurried and difficult; skin contrary to its usual state in these cases, hot and dry. Previous to the return of the spasm, he complains of a severe constrictive pain, which he refers to the bottom of the sternum, darting backward from this point to the spine, evidently in the direction of the diaphragm, which muscle is immediately afterwards convulsed, and subsequently the muscles of the back and trunk. These increasing at times produced opisthotonos. Pulse full, hard, and 120; tongue could not be examined.

Hydrargyri submuriatis, gr. iij. jalapæ, gr. xij.; 2dâ quâque horâ. Misturæ sennæ comp. ℥viij. olei ricini sp. terebinthinæ, aa ℥j. ℏ ft. enema, statim injiciendum.

Two o'clock A. M. Spasms more frequent; complains of pain all over his body.

C. C. ad ℥xl. nuchæ et dorso.

Was convulsed three times during the operation. The cupping has had a decided effect; the pulse is quick and fluttering; the whole body in a profuse cold perspiration; spasms not so frequent; says he feels a little better; bowels obstinately costive. The catheter was introduced, and about a quart of high-coloured urine drawn off.

Cont. cal. et jalap. omni horâ—Rep. enema.

Four o'clock A. M. The spasms have returned with renewed force; has great aversion to take his medicines; complains greatly of his throat, and feels as if he should be suffocated; the mental faculties are entire; bowels not opened; pulse small, irregular, and 140.

Cont. cal. et jalap.—Rep. enema.

Five o'clock A. M. Spasms general and violent; pulse irregular, and not to be counted; respiration greatly affected; is convulsed every five minutes; bowels have not been opened. He lingered until six o'clock, and then expired in a convulsion which lasted two minutes.

Sectio cadaveris—24 hours after death.—The dura-mater was healthy, and a quantity of serum was found between the arachnoid membrane and pia-mater. The substance of the brain was more vascular than usual, and there was more fluid in the lateral ventricles than natural.

That portion of the spinal cord between the third and fifth cervical vertebræ was highly injected; but of its usual consistence. The remaining portion was perfectly healthy.

The sympathetic nerve was very carefully examined, but nothing unusual was observed.

The mucous membrane lining the œsophagus, cardiac portion of the stomach, larynx, and bronchial tubes, was very vascular.

The heart and lungs were perfectly healthy; the blood found in the former was quite fluid.

The abdominal viscera were sound; the intestines inflated with gas; and the rectum was loaded with fæcal matter. The wound in the finger, which was not, originally, more than a quarter of an inch in extent, and which had completely cicatrized, was carefully exmined, and found not to extend deeper than the integuments. It had not reached any nerve of importance, nor injured any tendon.

The radial and median nerves which supply the finger were carefully dissected; their branches were found entire, and were not in the slightest degree inflamed.—*Ibid.*

GENERAL SUBCUTANEOUS EMPHYSEMA.

The following curious case is related by M. Vitry, in the *Archives Generales*, for March of the present year.

Case. A child, 26 months old, of good constitution, had a diarrhœa, then constipation, with loss of appetite, sleep, and spirits. On the 22d of December she had severe fever, which confined her to bed. M. Vitry was called in, and applied six leeches to the epigastrium, with lavements and emollient drinks, which relieved the symptoms during the night and next day, when the fever returned with great intensity, accompanied by severe abdominal pains. The pulse was quick but feeble—tongue moist, white at the base and red at the tip—thirst ardent—cough—obstinate constipation. Neither bleeding, lavements, abdominal fomentations, frictions, nor other remedy had any effect in relieving the symptoms, till the twelfth day of the disease, when copious alvine evacuations were procured, followed by a marked remission of the abdominal pains and the fever. But with this melioration of the abdominal affection, the cough increased, so as to become constant; accompanied by extreme agitation, and afterwards intense fever, indicating acute bronchitis. Leeches were now applied to the line of the trachea and bronchia, but without any relief.

On the 5th of January, to the foregoing symptoms were added considerable dyspnœa, especially when placed on the left side—face pallid, except the right cheek—thirst urgent. Six leeches to the intercostal spaces under the right axilla, without relief. 6*th*, The child had a most tremendous convulsive fit of coughing, soon after which, a swelling appeared at the upper part of the chest, which spread to the neck and face. The tumefaction was evidently emphysematous, and attributed by M. Vitry, to the bursting of some of the air-cells during the cough. The little patient's state became more and more alarming—the restlessness extreme—the sense of suffocation imminent—the extremities cold.

During the 7*th* and 8*th*, the emphysema made progress, invading the whole subcutaneous cellular tissue of the head, thorax, and abdomen. The swelling was so great, that M. Vitry despaired of its absorption, and therefore he determined to make some incisions for facilitating the escape of the air. In consultation with several physicians of Versailles, two incisions were made between the ribs, and towards the sternum on each side of the chest, when air was evolved in geat quantity. In four hours afterwards the little patient was greatly relieved; but on the 10*th*, two other incisions were made, and the air was freely discharged. From this time; the cough diminished and the child rapidly recovered.—*Med. Chir. Rev.*

ASCITES WITH PREGNANCY.

We have brought forward several cases in this Journal, where the operation of paracentesis was successfully performed during pregnancy. The following is another addition to the list, from the practice of Mr. James Russel, as recorded in the Medical and Physical Journal for May.

Mrs. Kelly, in the sixth month of pregnancy, was visited by Mr. R. who found the abdomen greatly distended—the legs œdematous—and the rest of the body emaciated. There were present also dyspnœa and constipation of the bowels. She was bled, and took calomel and jalap, which measures relieved the urgent symptoms, and Mr. R. was not again called for a week or ten days; when dyspnœa and painful tension of the abdomen were complained of. She was again bled and purged, with relief; but, in ten days more, the dyspnœa and cough were so alarming, that Mr. R. decided on tapping. The patient was now in the seventh month of pregnancy. The trocar was introduced two inches below the umbilicus, and twenty-three quarts of fluid were drawn off. The cough ceased, the respiration became free, and the tumefaction of the labia pudendi and legs soon subsided. She went on improving for more than a month, when labour came on, and she was quickly delivered of a feeble and emaciated child, which only lived ten days. In two months, the dropsical accumulation had again got to some size, and required the operation of paracentesis, which evacuated thirty quarts of water. The dropsy was a third time returning, when Mr. R. lost sight of the patient.

This, and other cases on record, prove the safety, and even the propriety of the operation during pregnancy. In general, the labour comes on soon after paracentesis; but in this instance it was otherwise.—*Ibid.*

CANCER OF THE CARDIA.

A lady, aged about 40, became affected in the month of November, 1826, with common symptoms of dyspepsia, and her complaint was considered as such by her medical attendants. In the beginning of 1827, the patient began to complain of some difficulty in swallowing solid food, and sense of nausea at the stomach after meals. These symptoms gradually increased to inability to swallow food, or rejection of the food undigested a few minutes after it was taken, by a species of regurgitation rather than vomiting. Mr. Brodie, Dr. Johnson, Mr. Andrews and others were consulted, and the case was considered to be disease about the cardiac orifice of the stomach. Blisters, local bleeding, and various means were used, without arresting, in the slightest degree, the rapid progress of the disease. During the month of May, very little food could be got into the stomach, and constant pain was complained of in the region of the cardia. The patient was nourished principally by enemata. In the beginning of June, she spat up rather suddenly a bloody kind of offensive matter, and all at once she acquired power, not only of swallowing, but of retaining the food. She now

took a good deal of nourishment, and some faint hopes were entertained of recovery. But the discharge from the œsophagus increased in quantity, and became deteriorated in quality—the fever wasted the patient—the thirst was constant—bad matters were passed by stool—the stomach again rejected food, and death put an end to her sufferings, towards the end of June. The dissection was carefully made by Mr. Howship, in the presence of Dr. Johnson, Mr. Andrews, and Mr. Carrick of Kensington. The lower portion of œsophagus, where it enters into the stomach, was in a state of open or ulcerated cancer, for the space of about three inches. A communication had taken place with the right cavity of the chest, in which was found some sanious effusion, and a considerable portion of lung contiguous to the original disease was disorganised and broken down. The stomach itself, and intestines were sound.

This disease was remarkable for the rapidity of its growth. Nine months previous to its fatal termination, the lady was in perfect health. In this respect, disease of the cardiac orifice of the stomach forms a striking contrast with that which affects the pyloric orifice. Where pyloric disease takes place, the food gets readily enough into the stomach—digestion goes on—and some chyme passes into the duodenum till the last. Emaciation is slow and progressive, and vomiting is a pretty constant symptom some hours after the food is taken into the stomach. Where the cardia takes on disease, on the other hand, the food is, in a great measure, prevented from getting into the stomach, and is regurgitated rather than vomited. The system is deprived of nutriment, and death soon closes the scene.—*Ibid.*

CANCER OF THE TONGUE.

In a recent number of the Revue Medicale, we find an account of extirpation of cancer from the tongue, in such a manner as to preserve the organ itself.

M. Thure, ætat. 35, of good constitution, came into the Hospital La Pitié, under the care of M. Lisfranc, in the beginning of September, 1826, affected with cancer of the tongue, occupying two-thirds of the right side of that organ, from its point to the base. The disease had existed since 1823; had begun by ulceration situated nearly an inch from its anterior extremity. The pains, slight at first and intermittent, became, at the beginning of 1826, continued and lancinating. Mastication was almost impossible, and articulation very difficult. The tongue was swollen, hard, and covered with ulcerations. On the right side, under the os maxillaris inferior, there were several lymphatic glands enlarged, and forming considerable swellings. The patient had been some time before on an antisyphilitic regimen, which aggravated the disease. Before coming into the hospital, he had consulted several surgeons, who all thought that the tongue was affected throughout its whole thickness, and recommended the extirpation of the part affected. M. Lisfranc, having reduced the submaxillary swellings by leeches, agreed with M. Mayor, of Lausanne, to employ for the removal of the disease the plan by ligature, recommended by this distinguished practitioner.

September 20th, the operation was performed in the following manner:—The patient seated in a chair, the head a little bent forward, and well supported, a straight bistoury was carried along the inferior part of the tongue to the place where it ceased to be adherent to the subjacent parts. The instrument traversed the organ from below upwards, and from before backwards, so that its point came out near the epiglottis, where the disease terminated. A section from behind forwards was made to separate the affected part from the surrounding tissues, which it was intended to preserve. This part of the operation being completed, the cancerous tumour was included in the noose of a ligature to strangle its base. The patient did not suffer much, and lost very little blood. He was again put to bed, and had emollient drinks and detergent gargles.

21st. The patient complained of severe pain; there was no diminution in size of the constricted part; there was an abundant salivation. The ligature was tightened, and the pains very speedily disappeared.

22d. No change in the size of the tongue, but, what is remarkable, a cicatrix was formed between the sound and diseased parts, throughout the whole extent of the longitudinal incision which had separated them. This adhesion was immediately destroyed, and a piece of fine linen introduced to prevent its recurrence. The constricted part, deprived of nourishment, soon became black; all the cancerous points were converted into eschars.

The ligature was removed on the sixth day. To the astonishment of every one, on the seventh day, when the dead parts had separated, it was perceived that almost the whole of the tongue was preserved, the surface only of the organ having been diseased. By the aid of detersives and emollients, and a little cauterisation, the wounds soon healed, and the patient was dismissed.

Some months afterwards, M. Lisfranc presented him to the Academy: he then had had no relapse, and the only difference that he felt was his speech being not quite so free as before the disease.

The case is regarded by the French surgeon as remarkable in more points than one. It proves that lymphatic swellings attending cancer may be destroyed by the use of leeches; an immense advantage, which will render operations practicable that otherwise would not be so. It proves also the efficacy of the measure proposed by M. Mayor for removing such tumours by ligature. But by far the most important point is, that we see cases where apparently the whole organ is affected with cancer, when in fact it is only on the surface. This fact furnishes a new

proof of the importance of Mr. Lisfranc's idea, that, before deciding to remove an organ that appears to be entirely cancerous, we should, by means of cautious incisions, discover its depth, and limit ourselves to the removal of such parts only as are affected.—*Lond. Med. and Phys. Jour.*

ULCER OF THE TONGUE.

This is an interesting case. G. R. ætat. 27, entered St. Thomas's, July 5th, under Mr. Travers, with an ulcer at the apex of the tongue, but more to the right than left side of it. It was larger than a shilling piece, its surface devoid of granulations, edges irregular and elevated. Four months previous to his admission he had a sore on the penis, for which he took mercury; about six weeks after this he had sore throat and eruptions, took mercury again, and got well; but, about three weeks ago, the sore on the tongue commenced. Mr. T. ordered extr. sarsapar. ℥ij. Decoct. sarsapar. ℥xij. Acid. nit. dilut. ℥j. Tinct. hyosciam. ℥j. A third part of the mixture thrice a day. Pil. hydr. submur. gr. v. Opii, gr. ½, at bed time. Linimentum æruginis to the ulcer. Under this treatment, with the application, subsequently, of a solution of lunar caustic, the sore rapidly improved, and, on the 26th, he was made an out-patient, the sore being no more than half its original size. *Medico-Chirurgical Review.*

EFFICACY OF TANNIN IN BLEEDING OF THE WOMB.—BY DR. PORTA.

The following are the results of this physician's investigations on the use of this remedy:—1st. The tannin acts in a particular manner on the uterus, when this organ is the seat of an irritation, which causes great bleeding from the womb, and when this discharge results from a chronic inflammation of the womb. 2d. In bleeding from the womb, owing to acute inflammation of this organ, it is necessary at first to subdue the inflammation by frequent evacuations of blood, and again to have recourse to the administration of the tannin. 3d. This medicine is of no good in hæmorrhages of the uterus, which are the result of an organic alteration of this organ. Lastly, this medicine, is deserving of preference over every other in the treatment of hœmorrhage from the womb, not only on account of the celerity with which it stops the bleeding, but also because it is efficacious in so small a dose, that the stomach can bear it when in the most irritable condition.—*Lancet.*

OBITUARY—MR. SHAW.

Pallida mors æquo pede pulsat pauperum tabernas Regumque turres.
Vitæ summa brevis spem nos vetat incho are longam.
Jam te premet nox, fabulæque manes,
Et domus exilis Plutonia.

It is our painful duty this quarter to record the decease of Mr. Shaw, which took place on the 19th July, in the 36th year of his age. This excellent anatomist, and deserving young surgeon was attacked with a formidable and protracted fever towards the end of May; but, after a time, he became so far convalescent as to bear removal into the country, and the most sanguine expectations were entertained of his ultimate recovery. On the 17th of July last, however, he experienced a sudden relapse, and survived only a few days.

Mr. Shaw was, for many years, Demonstrator of Anatomy in the School of Great Windmill Street, and took a very active part in the formation of the Anatomical and Pathological Museum of Mr. Charles Bell, a collection, we believe, almost unrivalled for the beautiful manner in which the preparations are put up. On the death of Mr. Wilson, Mr. Shaw became co-lecturer with Mr. Bell, and not long ago he succeeded Mr. Cartwright as surgeon to the Middlesex Hospital.

That Mr. Shaw was no drone, is evident from his writings. The Manual of Anatomy was happily conceived, and not less happily executed. Whilst it laid before the student the details and minutiæ of muscles, and ligaments, and so forth, it directed his attention to the pathological conditions, which those structures are apt to take on, and we do not hesitate to assert has been, and will be, of very essential service to the Junior Members of the Profession. His works upon the Spine evince considerable ingenuity and originality; and though, perhaps, some of his peculiar views may be carried a little too far, there is not a doubt that they are founded in truth and correct observation. Besides these larger works, his numerous papers on the nerves and other subjects, in our different Medical Journals, are strong proofs of able industry.

As a man, and particularly as a teacher, Mr. Shaw will be universally regretted. With the pupils of Windmill Street, he was popular to a degree, for his manners were of that frank, independent character which always tells upon the hearts of young men. He was not, as some are, reserved and supercilious, but entered into the feelings and sympathies of his pupils, and was in word and in deed one of them. Whether his labours in the cultivation of anatomy, may have impaired an originally robust constitution, we know not; but certainly, looking at Mr. Shaw, no one could have supposed it likely that he would have been cut off thus early. It is a melancholy circumstance when we see the youngest and the strongest swept away in their prime, whilst grey-beards still cling convulsively to a scarcely enviable existence; but it is still more melancholy to think, that men, like Mr. Shaw, after years of toil, should not be allowed to gather what they had sown, but should be called to their account in another world, just as they were beginning to taste the sweets of this!

To Mr. Bell, the loss will be great, but the family and friends of the departed, may console themselves with the reflection that he died with a fair fame and unspotted reputation. From our hearts we say,

"Peace to his manes!"—*Med. Chir. Rev.*

Medical and Philosophical Intelligence.

Peculiar effect of the Sulphate of Quinine. By M. Blaud.—During the prevalence of intermittent fever in the fall of the year 1825, we observed that the sulphate of quinine produced in several of the sick a considerable degree of dulness of hearing. This effect was manifested, when the remedy had been carried to the extent of twenty-four grains daily, and on the second or third day of its administration.

It was remarked particularly at the termination of tertian fevers, among children, men and women of a slender form and nervous temperament, and disappeared spontaneously about the eighth or twelfth day. A slight cephalalgia accompanied it, sufficient, however, to show, that it had its seat in the encephalon, which the medicine had probably sur-excited, especially towards the origin of the seventh pair. Since that time, the same phenomenon has frequently fallen under our observation.—*Nouv. Biblioth. Med. &c.*

Partial and Intermittent Alopecia. By M. Labanne.—We find in medical writings, many examples of complete alopecia, consequent upon violent diseases, great mental exertion, the use of mercury, &c. but the following case is, perhaps, unique in the records of medicine.

A man, 36 years of age, addicted to intoxication, but in other respects in good health; after having had an erysipelas of the face, perceived that he lost his eyebrows and beard, every year, about the fall of the leaves, and that they were reproduced with the same regularity in the spring. Throughout the continuance of this partial alopecia, the head and other parts supplied with hair, remained unaffected. The disease returned in this manner for six consecutive years.—*Revue Medicale.*

Messrs. Tiedemann and Gmelin have made many experiments upon the saliva of man, the dog, and sheep; the following are the results which they have obtained.

The saliva of man contains only from 1 to 2.5 per cent. of solid matter; that of the dog somewhat more. It consists, 1st, Of the principle of saliva (speichelstoff.) 2d, Ozmazome. 3d, Mucous matter soluble with the aid of carbonate of potash. 4th, Probably a little albumine. 5th, In man, a fatty matter containing phosphorus. 6th, Soluble salts, consisting of, 1st, Acetate of potash, which can only be demonstrated by incineration. 2d, Carbonate of potash, which in the sheep causes the saliva to effervesce with acids, it is probably in the state of bi-carbonate, and is found in greatest quantity in the saliva of the sheep, next in that of the dog, and least of all in that of man. 3d, Phosphate of potash, more abundant in man and the sheep, than in the dog. 4th, Sulphate of potash found in very minute quantity in either of them. 5th, Chlorure of potassium. 6th, Alkaline sulpho-cyanure, it is found in greatest quantity in the saliva of man, a small portion exists in that of sheep, and perhaps none at all in the saliva of the dog. The chlorure has potassium almost exclusively for its base in man; in the dog and sheep it is combined with sodium and a very minute quantity of potassium. 7th, Substances insoluble in water, which are, phosphate of lime, a little carbonate of lime, and a very small proportion of carbonate of magnesia.—*Annalen der Physik.*

Professr Saint André relates in the Gazette de Santé, eight cases of intermittent fever cured by the exhibition of piperine, after having resisted other modes of treatment. In one of them the sulphate of quinine was used unsuccessfully. The piperine was given in pills, in quantity of two, four, or more grains, according to circumstances.

M. Lisfranc has performed at the Hospital de la Pitié, the amputation of a very extensive cancer, situated upon the lower part of the rectum. The disease extended transversely from one tuberosity of the ischium to the other, and its antero-posterior diameter was about two inches. The finger introduced into the rectum, reached above the indurations, which terminated two inches from the inferior extremity of this intestine. The upper portion of the tumour was very moveable, and could be drawn considerably downwards. M. Lisfranc believed that it affected only the mucous membrane. Two semilunar incisions were made around the ulcerated parts, uniting at their extremities. He dissected from without inwards, as far as the middle of the sphincter; by means of the finger introduced into the rectum, he drew down the intestine, so as to occasion the procidence of the indurated membrane, and removed the whole with the curved scissors. The wound that remained resembled a deep funnel, and it was evident the sphincter muscles were in great part destroyed. Two arteries only were tied. The patient recovered after the lapse of three months; he retains his fæces as before, and experiences no pain on going to stool.—*Jour. Gen. de Médicine, &c.*

New species of Sago.—M. Plance presented to the Royal Academy, a new species of sago, introduced into commerce from the East Indies. It is distinguished from the common kind by being less coloured, and forming a blue with the tincture of iodine, which the latter will not do. The factitious sago from potatoes evinces the same property, but the blue colour disappears after a time, whereas the other is permanent; the latter has also a

different flavour, and is equally adapted to medical purposes.—*Arch. Gens. de Med. &c.*

Penetrating Wound of the Abdomen.—The wound had been caused by a triangular sword, which penetrated obliquely beneath the cartilage of the tenth left rib. The direction of the instrument was from below upwards, a little inclined to the left; the depth to which it penetrated about three inches. The direction of the wound, its examination, made with all the necessary precautions, and the attending circumstances induced M. Laney to believe that the inferior part of the pericardium had been wounded. A considerable hæmorrhage, convulsions, and an alarming syncope were the first symptoms, followed by a fixed and tensive pain in the injured part, separation of the ribs of this side, and great anxiety; symptoms which, according to M. Laney, announced an extravasation into the serous envelope of the heart; the pulsations of this organ were scarcely perceptible to the ear applied over the precordial region; the pulse had almost entirely disappeared. The impending danger was obviated by venesection; cups over the thorax; acid drinks; low diet, &c. At a later period, to facilitate the absorption of the extravasated fluid, moxa and other revulsives were employed, and after a lapse of three months and a half, the patient recovered. There is a slight depression of the left side of the thorax, the pulsations of the heart are very small, as well as those of the radial artery, indicating an atrophy of this organ, or adhesions of the pericardium. The patient could take no violent exercise without inducing syncope and acute pains in the precordial region. M. Laney related three other cases of wounds of the pericardium terminating successfully.—*Ibid.*

Aneurism treated by Compression.—M. Lisfranc reports a case in which there were four aneurisms; one on the inferior part of the humoral artery, another on the radial, a third on the ulnar, and a fourth on the posterior interosseal artery. M. M. Richerand and Laney were called in consultation. It was decided to adopt the plan of Valsalva, compression, the application of ice, &c. All these means proved abortive—unequivocal symptoms of aneurism of the heart manifested themselves, and the ligature upon the brachial artery, which had been proposed in case the above measures should not succeed, was now abandoned. The external aneurisms increased with great rapidity. M. Lisfranc contrived a kind of laced glove, which adapted itself exactly to the whole extent of the member. This plan completely arrested the progress of the aneurisms.

M. Lisfranc cites the case of a young German surgeon, who has had for eight years a false consecutine aneurism of the brachial artery, in which compression produced the like happy consequence.—*Jour. Gen. de Méd. &c.*

M. Lisfranc has performed the operation of amputating the neck of the uterus, upon twenty-two subjects. Of this number eighteen have been relieved by the operation; in several instances, two years have elapsed since its performance. Of the four others, two are in a fair way of recovery; one died twenty-four hours after the operation, and dissection evinced numerous latent cancers along the vertebral column and in the ovaries; and the other after a lapse of three months from a return of the disease.—*Arch. Gen. de Med. &c.*

Prussiate of Iron.—The Chevalier de Kirckhoff, physician at Anvers, has long employed this article with success in the treatment of epilepsy, when not depending upon any organic lesion. It has effected a cure in several instances, where all the usual remedies had been tried in vain.

His mode of administering the medicine, is to commence with very small doses, for example, half a grain daily for an adult, and increase them gradually till three, four, six, and sometimes more grains are taken at each dose. If the patient be of the sanguineous temperament, a large venesection is made to precede its employment, and leeches are repeatedly applied to the temples during its exhibition. An appropriate diet and regimen, are adopted in all cases.—*Jour. des Progres.*

Cæsarian Operation twice practised with success upon the same subject. By Dr. Schenk, of Siegen.—A woman, aged 36 years, of a slender form, had already been the mother of several children, when she became pregnant the seventh time while affected with mafacosteon. This disease had produced such deformity of the pelvis, that the tuberosities of the ischia were not more than two fingers' breadth distant from each other. The pains of labour had already continued three days, and the operation was imperiously demanded. The woman displayed great fortitude, and the child was extracted by an incision in the linea alba, according to the rules prescribed in such cases. It was perfectly developed, and soon gave signs of life, although, at first, it was in a state of asphyria. The extraction was unattended with difficulty, and not more than a pound and a half of blood was lost. Contraction of the uterus followed immediately, the wound was united by means of sutures, and after some pain in the back and loins, the blood flowed from the vagina. On the eighth day, symptoms of an alarming character, great pain and tension of the abdomen, suppression of the alvine and urinary evacuation, difficult respiration, frequent and concentrated pulse, diminution of the lochia, &c. made their appearance, and induced apprehensions for the result; they disappeared, however, under the use of large doses of castor oil, followed by stimulating enemata. Ninety hours after the operation the dressings were removed, and the wound was found reduced in size, from six to four inches; to-

wards the twelfth day a laudable suppuration was established, and with the exception of some temporary difficulty in passing the urine, occasioned by a slight inflammation of the bladder, no unpleasant occurrence took place. Cicatrization had not been completed in the centre of the incision, when three months after, the catamenia made their appearance; a small quantity of the menstrual discharge was also observed to flow from this part of the wound. The same thing took place in the following month, after which the wound was completely cicatrized. Notwithstanding the injunctions of Dr. Schenk; this woman again became pregnant in December, 1824, and the cæsarian operation was again performed with the same success.—*Jour. für Gobentshülfe.*

Plague.—M. Desgenettes has not said, as has been asserted, that the plague was never contagious. He believes it to be so, when it is accompanied by Authrax, and cites among other proofs, that it was communicated to five persons, by means of a silk cravat, taken from the neck of a person, who had authrax on this part of his body.—*Jour. Univ. des Sciences Méd.*

Cystotomy.—Comparative essays upon the results of the different operations of lithotomy, in the human subject, were instituted at the Hôtel Dieu some time since by M. M. Dupuytren, Sanson and Breschet. Of twenty-six subjects, twelve were cut by M. Dupuytren, in the bilateral method, eight by M. Breschet in the lateral method, and six by M. Sanson in his recto-vesical operation. M. Dupuytren lost none of those upon whom he operated, M. Breschet two, and M. Sanson one.—*Ibid.*

In the Revue Médicale for September, M. de Martin, jr. has reported several cases of Intermittent Fever, in which the Sulphate of Quinine was applied externally to blistered surfaces; from his experiments he has drawn the following conclusions.

1st. Sulphate of Quinine, applied to vesicated surfaces, arrests the progress of Intermittent Fever, when no obstacle intervenes to prevent its absorption.

2d. This salt operates in these diseases by a specific action, and not by revulsion or any local impression.

3d. The absorption of the sulphate, in contact with the denuded cutis, takes place very quickly.

4th. The Sulphate of Quinine thus absorbed appears to operate in a smaller dose, than when given internally.

5th. The Sulphate applied in powder to the cutis, produces great inflammation.

6th. Enviscated in a small quantity of cerate, it becomes much milder in its operation, and produces neither pain nor inflammation.

7th. This mode of administering the Sulphate, useful in many cases of simple intermittents, may be a great resource in those of a malignant and obstinate character.

M. Villermé has addressed the following note to the editors of the Archives Generales, &c. "You may add to the case by Dr. Godman of Philadelphia, related in your number for June last, the following fact, to which it bears a strong analogy. A woman was reduced to the last degree of emaciation by a total loss of appetite, and such an aversion to food that she could take no nourishment whatsoever; the epigastric region had long been the seat of some urgent affection. I cannot give further details, because I did not see the patient; but I well remember that the physician in attendance, a gentleman of much skill in his profession, told me, that from his experience in similar cases, he believed himself authorised in trying the effects of an active emetic. It was exhibited, and the woman after vomiting, with some degree of pain, a pseudo-membranous tube resembling the stomach in shape, was entirely restored to health."

Monstrosity.—M. Geoffroy St. Hiliare presented to the Royal Academy of Sciences, a memoir by Dr. de Rambour upon a living child born at Benais in Touraine, 30th Aug., 1826, and resembling the Chinese monster, in having the body of a fœtus attached to its epigastric region.

Both these subjects belong to the genus *hétéradelphe* of M. Geoffroy St. Hiliare, and present the phenomenon of a fœtus united by its abdomen to that of another child, in other respects regularly organized. The two cases differ, however, in that the Chinese monster is acephalous, which is not the case in the other, and the latter has, moreover, a more complete development of the thorax. The Chinese has also three fingers on one hand, and two only on the other, while in that of Benais both hands are well formed.

M. Geoffroy observed that this species of monstrosity was not very rare; it is met with not unfrequently among animals, and he had in his possession, a cat and dog *hétéradelphes.*

Vomiting attending Pregnancy.—The Repertoire Géneral d'Anatomie, &c. contains an essay on this subject by M. Dance, in which he infers from several cases there related, that, when protracted beyond its usual period, this distressing symptom arises from a morbid irritation of the uterus, which together with the membrana decidua, is in a state of inflammation. In two of the cases referred to, he had an opportunity of testing the truth of his conjecture by examination post mortem; pus, coagulable lymph, were found between the decidua and internal surface of the uterus, and other symptoms indicative of inflammation were also observed. He recommends in consequence, the employment of antiphlogistic measures, directed as nearly as possible to the uterus itself, in-

stead of acting upon the stomach, which is only sympathetically affected.

Oily matter in the blood.—M. Adam has observed in the body of a person, who died suddenly from poisoning by some unknown substance, an oily appearance of the blood throughout the venous system. M. S. Trail has also found an oily matter in the blood, forming with the serum of this fluid, a kind of emulsion. A similar phenomenon has been noticed by M. Hodgson in the blood of the horse.—*Jour. Universel, &c.*

Oleo-resinous extract of Cubebs.—By the distillation of twelve pounds of Cubebs, M. Dublanc, obtained two drachms and a half of essential oil. The residium was subjected to the action of successive portions of alcohol; and to the resin procured by the evaporation of the united tinctures, amounting to twelve ounces, the product of distillation was added, forming a compound to which he has given the above appellation. This compound, comprising in a small space, the active properties of cubebs, he supposes well calculated to obviate the inconvenience resulting from the exhibition of that article in large doses.—*Jour. de Chimie Médicale.*

From some experiments performed upon the urine of an icteric patient, M. Braconnot has come to the conclusion, that the yellow colouring matter of this fluid, is identical with that of saffron or polychroïte, as it has been called by M. Haüy. The same principle was found in an albuminous liquid extravasated into the cavity of the abdomen, together with cholesterine and a small quantity of picromel, leaving no doubt of the presence of bile in the latter.—*Ibid.*

M. Breral proposes the following test of the presence of alcohol in the essential oils. When a minute portion of potassium is mixed with an essential oil, no action, or an almost imperceptible one, is observable. The same metal added to an essential oil, containing one-fourth part of alcohol, assumes the round form and brilliant appearance of a globule of mercury, it is agitated, the oxide quickly disappears, and a slight noise accompanies these phenomena. When the alcohol forms a sixth, eighth, twelfth, or twenty-fourth part of the mixture, the same appearances takes place, but more slowly and with some modification, such as a diminution of the noise, &c. This test is not applicable to the oils of cloves and turpentine, which in a state of purity exert a slight action on potassium.—*Ibid.*

In the Gazette de Santé, Dr. Ourgand relates a case of Blennorrhagia, occasioned by the presence of a fish bone in the Urethra, the discharge continued several months, and was accompanied at various periods of its course, with pain about the neck of the bladder and other symptoms of inflammation of that viscus; the formation of a bubo in the left groin, and hæmaturia. An antiphlogistic treatment was productive of considerable relief, but the blennorrhagia still continued, and the patient experienced acute pain in erection. Finally, six months after the commencement of this affection, a fish bone ten lines in length, was discovered in the fossa navicularis, which being removed, every symptom speedily disappeared.

Gangrene of the Lungs.—A woman, 60 years of age, had been subject to repeated attacks of hæmoptysis, which ultimately disappeared at the period of the cessation of the menses. In July, 1823, she suffered from pain in the chest, without cough, which was removed by two applications of leeches. Notwithstanding this melioration, the patient still remained debilitated, and her weakness increasing, soon amounted to an entire prostration of strength. A violent attack of cough now supervened, followed by an expectoration of greenish mucus, in which floated a fatty matter; its appearance was evidently gangrenous, and its fetor insupportable: these symptoms continued with less severity for several days. M. Laennec was called in consultation. By an accurate examination of the thorax, he discovered gangrene, of very limited extent, in the right lung. Leeches were repeatedly applied, a nourishing diet, &c. recommended, and after two months, the patient was discharged cured.

This case is not only interesting as being an example of a very rare disease; it shows also, that this terrible affection may remain latent, without the usual symptoms of pneumonia, until its existence is demonstrated by the fetid expectoration. We may infer from this, the great importance of examining the lungs throughout their whole extent by means of auscultation and percussion, in every case of disease of these organs.—*Gazette de Santé.*

M. Leveillé read before the Royal Academy of Medicine, a case of Laryngo-bronchitis, masked throughout its whole course, by erysipelas of the face, and only recognized a few hours before its fatal termination. The subject of the case, a plethoric and robust old man of sixty-four years of age, was attacked in the first instance by acute pharyngitis, which readily yielded to local depletion by leeches. Six days after, erysipelas of the face made its appearance, for which he entered the Maison Royale de Santé. This disease pursued its usual course; the pulse was at first, full, temperature little altered, and the pharynx and tonsils, which were examined on account of the preceding affection, somewhat red and tumefied. There was a slight degree of somnolency, as usual in such cases,

but no hoarseness or cough, deglutition was unimpaired. The erysipelas gradually disappeared, under an appropriate treatment, and desquamation had already commenced, when on the evening of the ninth day, the patient was suddenly attacked with a severe cough, and expectorated a quantity of tenacious mucus, mixed with albuminous flakes, of which the nurse omitted to apprise the physician on his return, the following morning; little attention was therefore paid to the cough, which moreover, did not continue any longer. On the eleventh day after the invasion of the erysipelas, and the seventeenth after that of the pharyngitis, he was suddenly seized with a violent cough, or rather paroxysm of suffocation, and partly threw up a false membrane, reddish, tenacious, and resembling in every respect the concretions in croup. Symptoms of asphyxia soon manifested themselves, and the patient died in the evening. The autopsis displayed a mucous layer, extending from the tongue to the pharynx and superior surface of the epiglottis; from the margin of the latter, a pseudo-membrane originated, which becoming gradually thicker and more consistent in the larynx, formed the lining of the aeriel passages as far as the second divisions of the bronchiæ--the mucous coat beneath, was of an intense red colour—the œsophagus was healthy throughout its whole extent.

I do not cite this case, observed M. Leveillé, either as an example of croup occuring in advanced life, or of the rapid reproduction of the concretions which characterize this disease; many instances of this kind are recorded in medical writings; what is very remarkable, however, is the slow march of the laryngeal inflammation, during the erysipelas, and its rapid advance after the cure of the latter, without allowing time even to suspect its existence.—*Ibid.*

Extraordinary Growth.—A young man, seventeen years, son of a worker in porcelain, attached to the manufactory of Charenton, died some weeks ago, after a short illness, for which no other cause could be assigned, than the unusual growth of five inches in four days.—*Ibid.*

Experiments on the effects of Compression in Poisoned Wounds.—M. Bouillaud has lately read to the Royal Academy of Medicine, two memoirs on the subject; nine experiments are related in the first memoir. In five of these, from two to three grains of strychnine were introduced into the cellular tissue on the thigh of a rabbit, and according as compression was or was not made upon the limb, by means of a ligature placed above the wound, by a cupping-glass from which the air was not exhausted, or by simple pressure by the hand, upon the injured part, the operator was enabled to prevent or occasion tetanic symptoms and death. In the sixth experiment, six leeches were applied to the incision, made to introduce the poison, and notwithstanding they refused to adhere, all died. In the three last experiments hydro-cyanic acid was substituted for the strychnine with the same results.

In his second memoir, M. Bouillaud endeavours to establish, that venous compression, and not paralysis of the nerves, is the cause of the defect of absorption from the surface of poisoned wounds. With this view, he introduced a grain of strychnine into an incision made upon the thigh of a rabbit—convulsions supervened, which were produced or suspended at pleasure, according as he loosened or tightened the ligature. At the end of twelve hours, the wound was washed, and the ligature removed, convulsions did not recur. Gangrene of a limb was effected by means of a ligature, very tightly applied, the ligature was then taken away, and the animal evinced no symptoms of poisoning, although strychnine had been previously introduced into an incision made for that purpose. Symptoms of poisoning occurred, notwithstanding the division of the crural nerve, and when the poison was applied to the same nerve, isolated in another rabbit, no effect was produced. Convulsions followed when it was placed in contact with a vein similarly situated.

From these latter circumstances, the author concludes, that compression by the ligature, &c. acts only in arresting the venous circulation.—*Bulletin des Sciences Médicales.*

The minister of the Marine, has referred to the Royal Academy of Medicine, several memoirs of MM. Quoy and Gaymant, the naturalists attached to the expedition of captain Durville. These indefatigable travellers, have sent to the museum twenty-five boxes, containing more than five hundred objects of natural history. They announce, that according to observations which they have made, they hope to be able to present eleven new genera, and one hundred and three new species. The expedition is now directed to the coast of New Guinea, which they will probably find an abundant source of riches.—*Revue Médicale.*

M. Virey, on presenting to the Academy a bark analogous to that of cinchona, remarked, that the increasing scarcity of this latter article, had induced government to form the design of sending out botanists to ascend the Orinoco, and collect the best species of this plant, in order to transplant them to Cayenne and other French colonies. The seeds of the cinchona soon lose the power of germinating.—*Nouv. Biblioth. Médicale, &c.*

In the Annali Univ. de Med. Dr. F. Taroni relates a case, in which the placenta was detached by means of the injection of cold water, through the umbilical cord. The

woman had been delivered of a healthy child, thirty minutes before his arrival; the placenta was still retained, and there was considerable hæmorrhage. He attempted to extract the placenta by pulling at the cord, at the same time, that cold applications, frictions, &c. were made over the abdomen, but these measures proved unavailing. Two hours elapsed without effecting any change in the condition of the woman. The hæmorrhage, which nothing had been able to arrest, was accompanied by continual faintings. In this conjuncture M. Taroni resorted to the injection of cold water, as recommended by Dr. Mojon, intending to acidulate it with vinegar, should the water alone be insufficient; in about two minutes sharp uterine pains made their appearance, and the placenta and membranes were expelled.

This case, doubtless, affords some support to the plan of Dr. Mojon, but it appears to us that M. Taroni would have done better to have introduced his hand into the uterus, and endeavoured to detach the placenta, instead of confining himself for an hour and a half to simple traction of the cord, and frictions upon the abdomen. This manœuvre was the more strongly indicated inasmuch as the hæmorrhage was copious and unremitting; if it had proved unsuccessful, which we should scarcely anticipate, recourse might still have been had to the method adopted.—*Arch. Gens. de Med. &c.*

Tænia.—M. Murat has successfully treated several cases of tænia, by the decoction of the root of the punica granatum, in doses of two ounces repeated at short intervals. In one of them, the tænia was voided thirty minutes after the second dose. He thinks there is danger in combining purgatives with the remedy, as is done by some physicians. The bark should be fresh, and taken from an adult and vigorous plant; the want of success in its administration hitherto, he supposes to arise from the want of attention to this latter circumstance. It has, however, failed in several cases, where every precaution was adopted to ensure success.—*Ibid.*

Encysted Tumours on the Head.—M. Cloquet has long since abandoned the crucial incision and minute dissection of these cysts. According to him, the method which he has since adopted, is much more advantageous, in that without any great degree of caution, the tumours can be quickly removed, and the wound united by the first intention. The encysted tumour, of whatever nature it may be, is first divided in the direction of its greatest diameter; with a pair of dissecting forceps, he then seizes one of the edges of the cyst, and draws it towards him with as much force as its consistence will permit, while with a bistoury, he separates it from the integuments and other parts to which it is connected. This mode of dissection leaves an empty pouch and simple incision, which lightly compressed, closes and cicatrizes without difficulty.—*Ibid.*

Absence of the Urinary System.—Professor Mayer of Bowen, has published in the Zeitschrift für Physiologie, the following interesting case.—The subject was a still-born child, at the full period of utero-gestation. The umbilical cord contained only one artery; the crown of the head was depressed, the right eye affected with cataract, and the inferior extremities presented some irregularities of conformation, among others the absence of two toes on the right foot. Instead of the external organs of generation, there was found a small pendulous sac containing cellular tissue. There was no vestige of the anus—the gall bladder was entirely wanting. The intestinal canal terminated with the descending colon, and there was consequently neither sigmoid flexure nor rectum. The colon presented a diverticulum terminating in a cul de sac, and a cord analogous to the urachus, directed towards the umbilicus, but obliterated at the distance of four lines. *The kidneys, ureters and bladder*, were entirely wanting; in lieu thereof, *the capsulæ renales were twice their natural size.* The testicles were very small, and were found in the neighbourhood of the capsulæ. The epididymi were present, but the vasa deferentia terminated in the cellular tissue. There was no appearance of vesiculæ seminales or prostate. The abdominal aorto gave origin to the cœliac, superior and inferior mesenteric arteries as usual, and three very small capsulary arteries. There were no emulgent arteries. The aorto itself, bifurcated in front of the first lumbar vertebra; the umbilical artery arose from the right iliac, which was larger than that on the left side. The brain was depressed still more considerably than the cranium, and separated from it by an interval of two lines. Several of its convolutions had a cartilaginous consistence, which disappeared after having been immersed in alcohol; no other anomaly was perceptible, unless it were the extreme minuteness of the pineal gland. M. Mayer not finding any thing in the derangements of this organ which could account for the almost total absence of two organic systems, supposed that the condition of the spinal marrow, might afford some explanation; his conjecture was well founded.

At the second dorsal vertebra, the spinal marrow terminated abruptly in a rounded extremity of a club-like form. The ischiatic, obturator and crural nerves were nearly in their natural state. The vertebral column ended with the fourth false vertebra of the sacrum; of the last vertebra of this bone, and of the coccyx, a cartilaginous rudiment only existed. In relation to the grand sympathetic nerve, the author observed, that it was less developed than usual at the origin of the abdominal arteries. M. Mayer, after relating a case from Wolfstriegel, analogous to the preceding, remarks, that this absence of the urinary system, in a subject, whose lungs,

heart, liver, spleen, pancreas, and the greater portion of the intestinal tube, were in their natural condition, is well worthy the attention of physiologists. It would seem to show, that the most important functions of animal and organic life, may be performed, at least in the fœtus, without the concurrence of the urinary secretion. He observes moreover, that unless he be mistaken, this is the first case related, in which the absence of glandular abdominal organs, has been connected with that of the spinal marrow; and inquires if the presence of the latter be not essential to the production of the thoracic and abdominal viscera; he refers to a memoir by M. Teidemann, in which this theory is developed.—*Jour. des Progres, &c.*

Phlebites.—Clementine, 20 years of age, of a good constitution, having arrived at the sixth month of her first pregnancy, presented herself 11th January, 1827, at the Hospice de Perfectionnement, complaining of headach, and wandering pains in the breast—she was bled the next day. On the 13th and 14th an ill defined tumour accompanied with pain extending along the bicess muscle, was observed in the bend of the elbow; the day following, the pain had become more acute, and the swelling occupied almost the whole extent of the arm, attended with fever. 16th, tongue red and dry, agitation and suffering very great. 18th, the swelling extended to the thorax—the wound was enlarged and a very small quantity of pus was discharged. 19th and 20th, the condition of the arm is somewhat improved, but the breast is now affected, and the general symptoms more aggravated—20 *leeches to the sturnum.* 21st, pulse 130 and small, she is troubled with cough and intense thirst—12 *leeches.* In the evening, she was apparently better, but the weakness and depression were extreme—the next day, a large blister was applied to the breast. 24th, the debility advances apace; the swelling of the arm has considerably diminished, and the patient makes no complaint. 26th, towards four o'clock this morning, labour pains made their appearance, and followed in quick succession till half after ten; the lips and teeth have a fuliginous aspect, tongue black and dry, pulse exceedingly small; the patient is greatly exhausted, and in a state of extreme agitation. Half after eleven, M. Cloquet finding that the mouth of the uterus dilated too slowly, deemed it necessary to make an incision into it, to the extent of four lines. Finally, the unfortunate woman, collecting the remnant of her strength, assisted the contractions of the uterus and gave birth to a small fœtus, which evinced signs of life for about two hours—the mother died at 2 o'clock, P. M.

On dissection, the median basilic vein was almost entirely obliterated, its parietes about a line in thickness, and all the veins which emptied into this trunk were full of a white and very thick pus; the cephalic vein was unaffected, as were also the veins of the forearm. There was no suppuration in the cellular membrane beneath the skin, nor in the interior of the muscles. Till within a short distance of the clavicle, the brachial and its branches were much thickened and lined internally by a concrete purulent layer; from this point, it was filled with a very fluid pus, of a reddish colour, increasing in intensity as it approached the axilla; this matter was traced to the right cavities of the heart, which were entirely filled with it. The inflammation of the vein however, did not extend so far; at the scaleni muscles, it was scarcely perceptible, and the interior of the heart and superior cave, after being carefully washed, presented no traces of it whatsoever. Although there were marks of recent pleuritis, and evident pulmonary *engorgement* there was no true pneumonic inflammation, and all other parts of the body, were in a healthy condition.—*Arch. Gén. de Med. &c.*

Comparative Nutritive Properties of different kinds of Food.

A very interesting Report on this subject was formerly presented to the French minister of the interior, by MM. Percy and Vauquelin, two members of the Institute, the accuracy of which may be depended on. It may, at this period of public distress, be valuable in those families where the best mode of supporting nature should be adopted at the least expense.

The result of their experiments is as follows:—In bread, every hundred pounds weight are found to contain eighty pounds of nutritious matter. Butcher's meat, averaging the various sorts, contains only thirty-five pounds in one hundred. Broad beans, eighty-nine. Pease, ninety-three. Lentils (a kind of half-pea, but little known in England,) ninety-four pounds in one hundred. Greens and turnips, which are the most aqueous of all the vegetables used for domestic purposes, furnish only eight pounds of solid nutritious substance in one hundred. Carrots, fourteen pounds. And, what is remarkable, as being in opposition to the hitherto acknowledged theory, one hundred pounds of potatoes only yield twenty-five pounds of substance, valuable as nutrition.

One pound of good bread is equal to two pounds and a half, or three pounds, of the best potatoes; and seventy-five pounds of bread, and thirty-five pounds of meat, are equal to three hundred pounds of potatoes. Or, to go more into detail, three-quarters of a pound of bread, and five ounces of meat, are equal to three pounds of potatoes; one pound of potatoes is equal to four pounds of cabbage, and three of turnips; but one pound of rice, broad beans, or French beans, is equal to three pounds of potatoes.—*Edinburgh New Philosophical Journal.*

Detection of Hydrocyanic Acid in the Bodies of Animals poisoned by it, by MM. LASSAIGNE and LEURET.—The extreme delicacy of the test employed by M. Lassaigne to detect prussic acid in the bodies of poisoned animals,—namely, by means of the per-sulphate of iron, or the per-sulphate of copper, has been already pointed out. Being desirous of ascertaining after how long a period the poison might be discovered, MM. Lassaigne and Leuret made experiments in which animals were killed by hydrocyanic acid introduced into their food, or thrown into the stomach in a diluted state, the dose never surpassing more than the equivalent of five or six drops of the pure acid, or less than two drops: the animals were left after death for twenty-four hours in a chamber, and then buried in a moist earth a foot and a half or two feet deep.

The disinterment took place after various periods, from fifteen days to a month, and the stomach and first portions of intestines being separated, were well divided and mixed with pure water, and distilled; a little sulphuric acid was added to the substances in the alembic, and the recipient was cooled by ice and water.

The products were rendered slightly alkaline, and then tested by the per-sulphate of iron or sulphate of copper, and a little excess of muriatic acid was poured upon the precipitates, occasioned by these salts. No prussic acid could be discovered in animals, the viscera of which was in a state of complete putrefaction: it was found after intervals of two or three days, but never after a longer period than eight days.

From these experiments it appears—1. That prussic acid cannot be discovered in animals poisoned by small quantities of it, after exposition of these bodies for two or three days to the air. 2. That the disappearance of the poison in the viscera after a longer period than this is due to its decomposition, which is favoured by the contact of the putrescent animal matter. 3. That when it is necessary to examine a body judicially to ascertain the presence of this poison, it is important that it should be done as quickly as possible.—*Journal of Science.*

Rheine, a peculiar Substance in Rhubarb.—M. Vaudin treated one part of rhubarb with eight parts of nitric acid at 36° (Baumé) with a gentle heat, and then reducing it to the consistence of a sirup, and diluting it with water, he observed that a peculiar substance was precipitated, which he has denominated Rheine, and which has the following properties when dried:—It is of a yellowish orange colour, without any peculiar swell; its taste is rather bitter, and it is almost entirely soluble in alcohol and ether: these solutions become yellow by acids, and of a rose-colour by alkalis. Rheine burns like other vegetable bodies, especially starch. Rhubarb treated directly by sulphuric ether yields a perfectly similar substance: this proves that the new substance exists already formed in the rhubarb, and that it is not acted upon by the nitric acid.—*Jour. de. Chim. Med.*

Sulphate of Quina.—According to MM. Pelletier and Caventou, not less than 90,000 ounces of sulphate of quina were manufactured in 1826 in France; a quantity which could not have been administered to less than 1,444,000 persons.—*Ibid.*

Adulteration of Sulphate of Quina with Sugar.—M. Winkler has found sulphate of quina, in commerce, adulterated with sugar. The quantity of adulteration was ascertained by dissolving the salt in water, precipitating the quina by carbonate of potass, filtering the liquid, evaporating to dryness, and digesting the residuum in alcohol. This fluid left the sulphate and carbonate of potash, but dissolved the sugar, and by evaporation the latter was obtained in its separate state.

M. Winkler has also met with benzoic acid adulterated with sulphate of lime in crystals. —*Bull. Univ.*

Composition of Cyanic Acid.—M. Wohler some time since announced the production of cyanic acid, and cyanates, corresponding in composition to the substance presumed to exist in the fulminating compounds of silver, mercury, &c., the nature of which was made out by MM. Liebig and Gay Lussac. M. Liebig, upon repeating M. Wohler's experiments upon his cyanate of silver, obtained only 71.012 per cent. of oxide of silver, instead of 77.23, which was the quantity present according to M. Wohler's analysis, and concluded that the acid was the cyanous, and not the cyanic. The latter philosopher was consequently induced to repeat his experiments: one of his methods of decomposing the cyanate of silver was by muriatic acid gas: at first liquid cyanic acid forms, which is very soon transformed into a white crystalline mass; but, on continuing the operation, and applying a higher heat, a large quantity of muriate of ammonia and cyanic acid is evolved. This process indicated 77.5 per cent. of oxide of silver in the salt. Another process consisted in dissolving the cyanate in nitric acid, and precipitating the silver by muriatic acid, the result was 77.05 of oxide per cent. A third analysis, made by reducing the silver of the salt, gave a result of 77.35 per cent. oxide. The mean of these is 77.3, and the theoretical number obtained by calculation is 77.23, so that the acid appears to be truly the cyanic; and the curious fact of its being the same in composition with that in the fulminating compounds of silver and mercury, but very unlike in properties, still remains undisturbed.

Bull. Univ., A. viii. 53.

Indigo and Indigogene, by M. Liebeg.—1½ part of pure indigo, 2 parts of proto-sulphate

of iron, 2½ parts of hydrate of lime, and from 50 to 60 parts of water, were digested together for 24 hours in a close vessel, which had previously been filled with hydrogen. The clear liquor over the sulphate of lime and oxide of iron, had a yellowish red colour, and was separated by a syphon filled with hydrogen, and mixed with diluted muriatic acid, containing some sulphite of ammonia dissolved; a dense white precipitate was formed, becoming blue in the air. This was gathered in a filter without contact of air, and washed with boiled water containing sulphite of ammonia in solution, and dried at 212°, in close vessels, through which a current of hydrogen was continually passed. The upper surface of the mass became of a blue colour, but the lower remained of a dull white.

This white substance was called Indigogene. It did not change colour in dry air, but under water became of a deep blue, which, by drying, assumed a coppery appearance. The blue substance volatilized by heat without leaving any residue, forming purple vapours, which condensed, when cold, into crystals differing in nothing from sublimed indigo. *Indigogene* dissolves in alkalis without neutralizing them: it is also soluble in alcohol, but insoluble in water or acids.

A given quantity of this indigogene was acted upon by ammonia and the weight of the undissolved blue portion ascertained, it appeared that the weight of the pure portion dissolved was 0.404 grammes (6.224 grains.) The solution was put into an inverted jar, over mercury, and oxygen gas gradually passed in until absorption ceased, and then the liquid containing the precipitated indigo was evaporated to dryness at 212°. The weight of the substance was increased to 0.047, *i. e.* 11.5 per cent.

Not having obtained indigogene *perfectly* pure, M. Liebeg did not attempt to analyze it for the ultimate composition. He remarks, that indigo is, perhaps, the only organic body from which one of its constituent parts may be taken without total decomposition; and which, by oxidation, passes to the state of an indifferent body, having much analogy with peroxides.—*Ann. de Chimie*, xxxv. 269.

Peculiar Formation of Nitre.—The leaves and stems of beet root contain oxalate and malate of potash. Some leaves were tied together and hung up in a warm and slightly humid place, where there was but little light, to dry. Being examined at the end of several months, they were found penetrated with, and covered by, an immense number of minute crystals of nitre. The oxalic and malic acids had been replaced by nitric acid; but whether from animalized matter naturally in the leaves of the plant, or from the action of the air, or in what manner, is not known.—M. Henri Braconnot, *Ann. de Chimie*, xxxv. 260.

Specific Heat of Gases.—MM. Aug. de la Rive and F. Marcet having made numerous experiments on the above subject, have arrived at the following conclusions:—

1st, That equal volumes of all gases under the same constant pressure, have the same specific heat.

2dly, That all other circumstances being equal, the specific heat of all gases diminishes with diminished pressure, in a slightly converging series, and in a much less degree than that of the pressures.

3dly, That each gas has a different conducting power; that is to say, all gases have not the same power of communicating heat. —*Ann. de Chim. et de Phys.*

Paper to resist Humidity.—This process, which is due to M. Engle, consists in plunging unsized paper once or twice into a clear solution of mastic in oil of turpentine, and drying it by a gentle heat. The paper, without becoming transparent, has all the properties of writing paper, and may be used for the same purposes. It is especially recommended for passports, workmen's books, legal papers, &c. When preserved for years it is free from injury, either by humidity, mice, or insects. It is further added, that a solution of caoutchouc will produce even a still better effect.—*Kunst und Gewerbe-blatte.*

Incandescence and Light of Lime.—The experiments made by Lieut. Drummond upon the light of lime and other earths when highly ignited, with the highly interesting application which he has made of that emitted from lime, to the purpose of geodesical surveys, has induced M. Pleischel to repeat and vary the results. He states that the utmost light is given by lime; the earth being pulverised and exposed on burning charcoal to the heat excited by a jet of oxygen falling upon it. He endeavours to account for the effect, by supposing a kind of pulverulent atmosphere disengaged from the lime at the high temperature used, and considers that the substances which are competent to emit molecules only in the gaseous state, cannot produce this intense light.

Zeitschrift für Physik, &c.

Evolution of Heat during the Compression of Water. May 14, 1827.—M. Arago announced to the Academy of Sciences, that M. Despretz had ascertained experimentally, that the compression of water by a force equal to 20 atmospheres, caused the disengagement of one sixty-sixth part of a degree of heat.—*Ann. de Chim.*

Magnetic Repulsion.—A very remarkable result has been obtained by M. Becquerel, from the use of an extremely delicate magnetic arrangement, which he has for the pre-

sent called a *sideroscope*. Its use is exactly the same in principle as that of the magnetic needle, indicating iron, for instance, by the attraction manifested; but it is so delicate that it will show it in the most minute quantity possible, as, for instance, in gold, silver, or copper money, innumerable minerals, &c. This instrument shows no magnetic power or attraction in gold, silver, copper, palladium, tin, lead, zinc, or brass, when chemically pure, and a great many vegetable and mineral substances have no action on it: but the most curious result is, that very pure bismuth and even that of commerce has a *repulsive* power, which, if it be found ultimately to be independent of any magnetic *polarity*, is the first fact of the kind that has been made known. Antimony also presents the same phenomenon.—*Ibid.*

Diminished Solubility of Substances by Heat.—Mr. Graham has added one to the few facts of this kind with which we were acquainted, and has accompanied its description with some very interesting considerations, which may be found at length in the Philosophical Magazine, N. S., ii. 20. The salt experimented with by Mr. Graham is the phosphate of magnesia; which may be prepared by mixing a solution of 21 parts of phosphate of soda with one of 15.375 parts of sulphate of magnesia: within 24 hours the phosphate of magnesia precipitates in acicular crystals; they should be agitated with repeated portions of water, then thrown upon a filter with more water, and left to dry.

Solutions were obtained by occasionally agitating this salt with water in the proportion of 2 ounces to a pint of the fluid, for four days; being then decanted and filtered, they had a sweetish taste. A quantity of this fluid being heated in a water-bath, became turbid before the temperature had attained 120° F.; at 212° a cloudy precipitate slowly subsided, and the supernatant fluid became nearly transparent. The precipitate was found to be anhydrous posphate of magnesia; and, by further experiment, the difference in solubility was found to be such, that water at 45°, dissolving $\frac{1}{744}$th part its weight of the anhydrous salt, water at 212° only dissolved $\frac{1}{1151}$th part. When in the state of crystals, or as hydrate, the proportions of salt were $\frac{1}{322}$ and $\frac{1}{498}$ to 1 of water.

Mere continuance of the heat had no effect in increasing the precipitate either of this salt, or from aqueous solution of lime, provided no part of the solution was at any time converted into vapour; but if the solution only occupied a small part of the vessel, and ebullition came on, then, although all the water might be returned to the solution, yet the precipitation went on, and might be increased *ad libitum*, particularly in the case of lime water. The cause of the precipitate appears to be the same in all these cases. The moment a drop of the solution is converted into vapour, it deposites the quantity of lime or salt which it held in solution; and in the case of bodies which dissolve so sparingly and with so much difficulty, although the water be returned again to the solution, it is incapable of re-dissolving what it has deposited. We know that it would be a hopeless task to form a saturated solution of lime, by agitating with the water no more than the few grains which it is capable of dissolving; and in the case of ebullition, when the lime is once deposited, there should be the same difficulty in taking it up.

Mr. Graham states that he has observed this effect not only in lime-water and in solution of phosphate of magnesia, but to a certain extent in all bodies of difficult solubility, in the sulphate of lime, for instance, even when greatly diluted; and he believes that the deposite from slight boiling observed in many mineral waters, and generally attributed to the dissipation of carbonic acid gas, depends, in some instances, upon this cause. However weak the solution may be, it is evident that a portion of the salt may be deposited in this way.—*Qart. Jour. of Science, &c.*

Test for the Presence of Nitric Acid.—The following method is one devised by Dr. Liebig, for the detection of this substance, which it will effect, he says, when there is not more than a four hundredth part of the acid present. The liquid to be examined must be mixed with sufficient sulphuric solution of indigo to acquire a distinct blue colour, a few drops of sulphuric acid added, and the whole boiled. If the liquid contains a nitrate, it will be bleached, or, if the quantity is very small, rendered yellow. By adding a little muriate of soda to the liquid before applying heat, a five hundredth of nitric acid may easily be discovered.—*Ann. de Chimie*, xxxv. 80.

Crystallization of Phosphorus.—By the fusion and careful refrigeration of a large quantity of phosphorus, M. Frantween has obtained very fine crystals of an octoedral form, and as large in size as a cherry-stone.

Solution of Phosphorus in Oils.—The solutions of phosphorus in fixed oils are so luminous as often to be resorted to for the exhibition of this peculiar property of phosphorus; but M. Walcker has remarked, that the power which they ordinarily possess is instaneously destroyed by the addition of small quantities only of certain other substances, as the essential oils. The rectified oils of turpentine and amber, the oils of rosemary, bergamotte, lemon, camomile, angelica root, juniper berries, and parsley seed, the oil obtained by the distillation of the nutmeg, all produce this effect when their quantity is not more than one-fiftieth part of the luminous oily solution of phosphorus. The same effect is produced by adding about a fifth of the oils of aniseed, cajeput, lavender, rue, sassafras, fern, casca-

rilla, mint, orange flowers, fennel, valerian, cherry laurel, or bitter almonds, or balsam of copaiba; but the oil of cinnamon, rectified petroleum, balsam of Peru, and camphor, have no such effect.—*Annal. der Phys.* 1826, p. 125.

New Publications.

Traité d'Anatomié Topographique, ou Anatomie des régions du corps humaine, considerée specialement dans ses rapport avec la chirurgie et la médecine operatoire; par M. P. H. Blaudin. 1 vol. 8vo.; avec atlas de 12 planches, Paris.

Practical Observations on the management and Diseases of Children. By the late C. T. Haden, Esqr. with additional notes, and a biographical notice of the author, by Thos. Alcock, surgeon.

The Medical and Surgical Student's Synopsis and Guide, comprising a detail of the proper course of study and works to be consulted, &c. By G. T. Hayden, Licentiate of the Royal College of Surgeons in Ireland. 12mo. pp. 141.

Mems, Maxims and Memoirs. By William Wadd, Esq. Surgeon Extraordinary to the King. 8vo pp. 303.

Medical Ethics; or a Code of Institutes and Precepts adapted to the professional conduct of Physicians and Surgeons. By the late Thomas Percival, M. D. F. A. S. and A. S. Lond. F. R. S. and R. M. S. Edinb. &c. &c. with additions, illustrative of the past and present state of the profession and its collegiate institutions in Great Britain. 12mo pp. 360.

Introduction to the Science of the Pulse, as applied to the practice of Medicine. By Julius Rocco, M. D. 2 vols. 8vo.

A Synoptical Chart of the various dislocations to which the human frame is subjected, comprising their diagnostic symptoms and modes of reduction. Arranged by J. P. Cunningham, M. D.

L'Onanism; par Tissot, nouv. edition. 1 vol. 12mo. Paris.

Traité de la Moelle épiniere et de ses maladies; par C. P. Ollivier. 2 vols. 8vo. 2d edit. revise, corrigée et augmentée.

An Introduction to the Comparative Anatomy of Animals; by C. G. Carus, M. D. &c. Translated from the German by R. F. Gore, M. R. S. 2 vols. 8vo. and a 4th vol. of twenty plates, with explanatory References.

A Memoir on the Diagnostic Signs afforded by the use of the Stethoscope in Fractures and in some other Surgical Diseases. Translated from the French of M. Lisfranc with Notes and Additional Observations. By J. H. Alcock. 12mo. pp. 36.

A Manual of Comparative Anatomy, translated from the German of J. F. Blumenbach, with Additional Notes, by William Lawrence, F. R. S. Surgeon to St. Bartholomew's Hospital, to Bridewell and Bethlehem Hospitals; &c.&c. Second edition revised and augmented by Wm. Coulson, Demonstrator of Anatomy at the Medical School, Aldergate St. and member of the Zoological Society.

Works in Press.

Précis de Nosologie et de Therapeutique; par M. Barbier. 2 vols 8vo. Paris.

Principes de Physiologie Pathologique; par M. Begin. 2d edition augmentée d'un volume, 2 vols. 8vo. Paris.

Formulaire pour la preparation et l'emploi de plusieurs nouveaux médicaments, tels que, la noix vomique, les sels de morphine, l'acide prussique, la strychnine, la vératrine, les alcalis des quinquinas, l'émétine, l'iode l'iodure de mercure, le cyanure de potassium etc. par Magendie, sixième edition. 1 vol. 12mo. Paris.

Traité des Rétentions d'Urine, et des autres affections qui se lient au retrecissement de l'urètre, suivi d'un grand nombre d'observations; par Segalas. 1 vol. 8vo. avec dix planches.

Traité élémentaire de Chimie, avec les principales applications aux arts et manufactures, par M. Despretz, professeur de physique au college royal de Henri, &c. Deux forts vol. 8vo. avec planches soigneusement gravées.

Pharmacopée Raisonnée, ou Traite de Pharmacie théorique et pratique; par M. M. Henry pêre, chef de la pharmacie des hôpitaux, et hospices de Paris, etc. et Guibourt, membre de l'Académie royale de Médecine, l'un des rédacteurs du Journal de Chimie Medicale.

Flore Générale des environs de Paris; par F. F. Chevallier M. Dite. 2d vol. 8vo. Paris.

Observations on the Climate of Torqua and the southern part of Devonshire generally, comprising an estimate of its value as a remedial agent in pulmonary disorders, and tabular extracts of a series of meteorological journals, kept in the south of Devon from 1807 to 1827. To which is added a practical inquiry into the comparative merits of the various remedies and modes of treatment employed in the prevention and cure of Pulmonary Consumption. By William Scully, M. D. &c.

Cases and Observations on the successful treatment of disorders of the Digestive Organs, Asthma, Deafness, Blindness, Lameness, &c. by Galvanism, &c. 2d edit. By M. La Beaumé, F. L. S. &c.

Outlines of Modern Midwifery; and early in the Spring a work on the Diseases of Women and Children. By Dr. Conquest.

Treatise on the Cutaneous diseases incidental to Childhood. By Walter C. Denny, Surgeon to the Royal Infirmary for Children, &c. Illustrated by twenty-four coloured delineations of the most important diseases.